FIRE HISTORY OF THE RIVER OF NO RETURN WILDERNESS: RIVER BREAKS ZONE

FINAL REPORT

December 15, 1984

Stephen W. Barrett

Systems for Environmental Management

TABLE OF CONTENTS

	page
INTRODUCTION	1
STUDY OBJECTIVES	1
PART I -- Non-Wilderness Sampling: Colson Creek	
Study Area	5
Methods	7
Results/Discussion	11
PART II -- Wilderness Sampling: Chamberlain/Disappointment	
Study Area	20
Methods	22
Results/Discussion	22
PART III -- Wilderness Sampling: Salmon River Corridor	
Study Area	31
Methods	32
Results/Discussion	32
CONCLUSION/DISCUSSION	38
LITERATURE CITED	40
APPENDIX	

Introduction

In August 1983, the Intermountain Forest and Range Experiment Station (Northern Forest Fire Laboratory) began a fire history study in cooperation with the River of No Return Wilderness (RONR) Fire Management Steering Committee, and Systems for Environmental Management. The goal was to provide RONR planners with baseline data on fire's past role in the ponderosa pine (*Pinus ponderosa*)/Douglas-fir (*Pseudotsuga menziesii*) River Breaks Zone (figs. 1, 2). This zone covers all of the relatively dry, lower elevation slopes found along the canyons of the Salmon River drainage. Historically, fire has played an important role in the River Breaks, and data were sought by RONR Fire Management Steering Committee for its development of the Wilderness Fire Management Plan, to be completed in 1985.

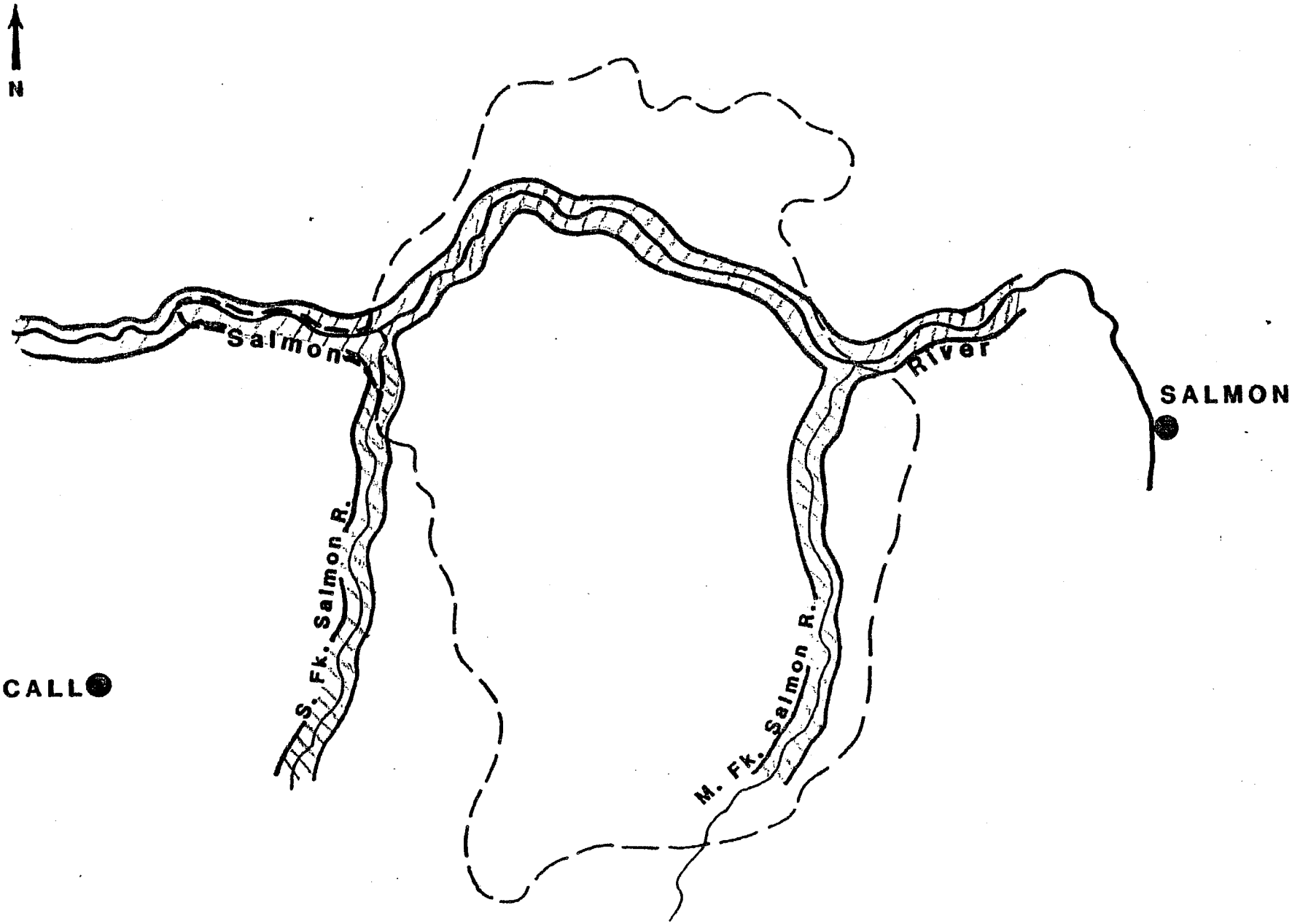
Study Objectives

Objectives of the study were to determine the fire history of several representative study areas below 6000' elevation, by collecting samples from fire-scarred trees. These data were to form the basis for interpretations about historic fire intensities, sizes, and frequecies. Another goal was to develop interpretations about historic fire effects. We sought to accomplish this goal by collecting data on stand species composition and tree succession, as well as data on stand age classes.

Data were desired from 3 representative study areas, to be selected after examinations of aerial photographs and after aerial reconnaisances of the River Breaks. We first wanted to sample fire history in a non-wilderness study area, adjacent to the RONR. The goal here was to obtain a relatively large number of fire scar samples, which is not possible within the Wilderness because of sampling restrictions and difficulty of collection.

Figure 1. River of No Return Wilderness.

Figure 2. River Breaks zone, River of No Return Wilderness.



A second intensive study area was desired within the RONR itself. The goal here was to generally verify results from the heavily sampled, non-wilderness study area. Finally, because the River Breaks Zone covers such an extensive area, we sought to collect samples at various points along the Salmon River corridor. The goal here was to obtain a number of spot-checks of fire history, to determine if results from the 2 intensive study areas were generally applicable to the broad zone.

PART I--NON-WILDERNESS SAMPLING:

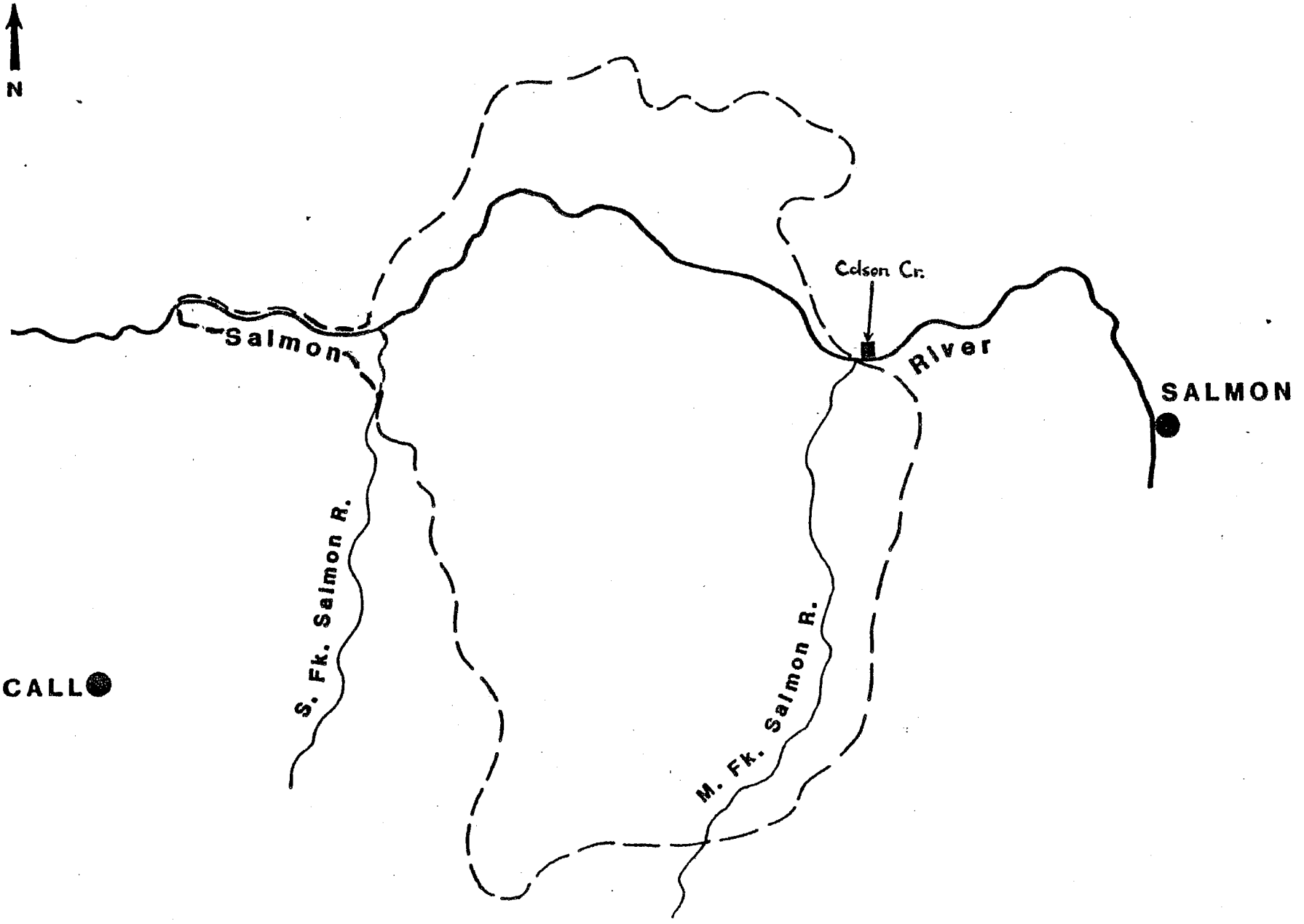
COLSON CREEK STUDY AREA

Study Area

After conducting aerial and road reconaissances, an approximately 3000 acre study area was selected in the non-wilderness Colson Creek drainage of the Salmon National Forest (North Fork Ranger District). The study area encompasses about 40% of the drainage and is located about 1 mile north and 6 miles west of the RONR wilderness (fig. 3). A tributary of the Main Salmon River, Colson Creek was selected because it seemed representative of the lower elevation communities within the adjacent Wilderness, and the area's extensive road system allowed collection of a large number of fire scar data.

Typical of many River Breaks drainages, Colson Creek has a very steep north-south gradient, flowing from 7600' to 3100' in about 5 miles. Dry forest habitat types (Steele et al. 1981) characterize most of the study area, with the steep slopes below about 5000' occupied by Pipo/Fesc, Pipo/Agsp, Psme/Feid, and Psme/Syal habitat types. North aspects, and the cool, dry slopes between about 5000-7000', usually support Psme/Caru or Psme/Phma habitat types. The study area's narrow riparian zone ranges in habitat type from Psme/Syal to Abla/Libo, the latter beginning above about 4600'. Uneven-aged stands are characteristic throughout most of the study area, and these stands range from very open, sparsely forested ponderosa pine, to moderately densely stocked ponderosa pine and Douglas-fir. Maximum tree ages range from 300-500 years.

Figure 3. Colson Creek study area.



Methods

The methods of Arno and Sneck (1977) were used to document fire history. First, transects were run throughout the area's road system below about 6000', and searches were made for old growth, fire scarred trees. A chainsaw was used to cut partial cross-sections from trees having the most complete fire scar records. This sampling was done in clusters of fire scarred trees, with the trees usually located within several hundred yards of each other. For later fire history analysis, a cluster was considered to be a stand when there was no apparent change in community characteristics (stand size generally is less than 100 acres). At least 2 fire scarred trees were sampled in each stand.

Habitat types were documented in each stand by first establishing 3 representative, circular plots (375 m2 each). This was followed by estimation of canopy coverages for each tree and undergrowth indicator species. Data on tree succession was also collected in these plots. The method here was to estimate tree canopy coverages according to 3 d.b.h. classes (0-4", 4-20", 20+"), the size classes to be used as a general indication of species succession over time. Finally, at least 3 increment cores were obtained from representative age classes within the stands.

In the laboratory, the fire scar samples were air-dried and sanded to a polish. A 7-25X binocular microscope was then used to make ring counts, for a preliminary dating of the fire scars. The next step was to estimate the actual fire years by adjusting closely similar ring counts among a cluster of sample trees. This was done by adjusting unclear ring counts to sample trees having the clearest annual rings (adjustment generally did not exceed 3 years). The next step was to construct Master Fire Chronologies, defined as the period of relatively uninterupted fire occurrence per given land unit.

This was done by making subjective determinations of the relatively continuous period of fires, first for the entire study area, then for the network of small sample stands.

Fire frequencies were then calculated for these land units according to 2 historical time periods: (1) the Pre-Fire Suppression Period (pre-1935), and (2) the Fire Suppression Period (1935-1984). (Area fire records suggested that 1935 seemed to be a reasonable benchmark year for designating the beginning of relatively efficient fire suppression in this remote region). Several statistics were examined in the fire frequency analysis. The first was mean fire interval (MFI), which is calculated by dividing the total number of years in a given period by the number of fire intervals. The second statistic is the range of fire intervals, or, that period between the minimum and maximum fire intervals documented in a Master Fire Chronology. Finally, an examination was made of the number of years since the last fire in a given land unit.

Fire maps (USDI Geological Survey 7.5 minute topographic series) were then developed for the 2 intensive study areas by: (1) coordinating the adjusted fire scar dates with the sample trees' field locations (these were marked in the field on 7.5 minute topographic maps), and (2) where possible, using 1:12,000 aerial photographs to trace the margins of fire-initiated age classes (often, the dates of these fires can be identified on nearby fire scar samples)(maps on file). The criteria used for identifying fire-initiated age classes were as follows: (1) substantial numbers of early-seral trees of similar d.b.h. had to be present in a stand (identified either in the field or by aerial photographs), (2) at least 3 pith samples from each apparent age class, cored at a height of 1 foot, had to date to within 10 years of a nearby fire scar date, if available, or, (3) in the absence of a nearby fire scar

date, cores alone could be used to identify an age class if at least 3 closely-similar pith dates were obtained from a stand.

To analyze stand succession, tree graphs were developed as follows, using the data collected in the stand plots (data on file). Tree densities over time were graphically displayed by plotting the canopy coverage of each species (X axis) according to the 3 d.b.h. classes (Y axis)(fig. 4). The resulting data formed the basis for interpretations about the fire effects on stand structure in River Breaks communities.

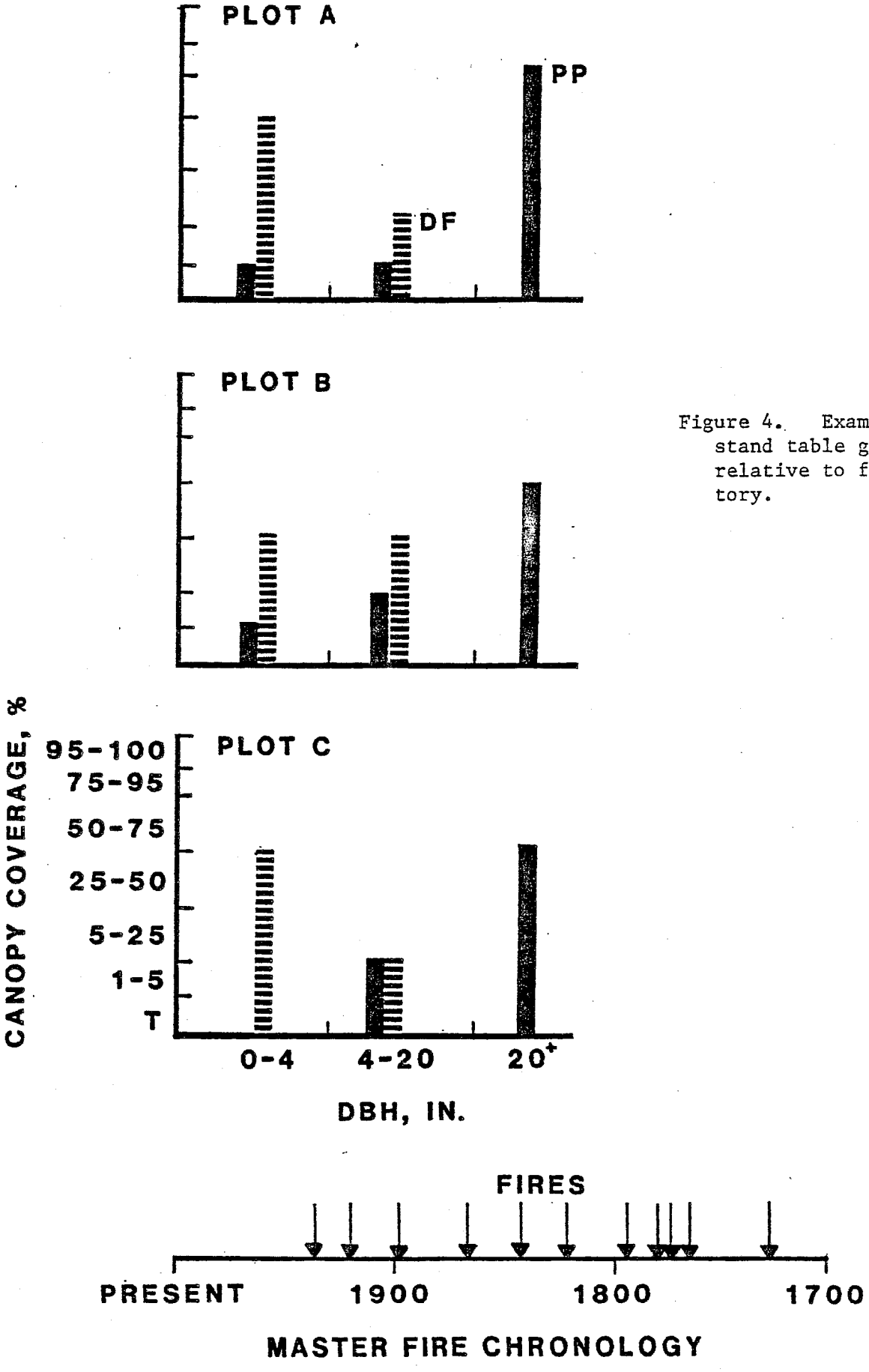


Figure 4. Example of stand table graphs relative to fire history.

Results/Discussion

Seventy-five fire scar sample trees were obtained from the Colson Creek study area. Of these, 72 were from ponderosa pine and 3 were from Douglas-fir. Most trees had less than 10 fire scars each, but several were found that had more than 15 scars each (the maximum number of scars per tree was 20). The earliest fire scar dated to about 1464, however, few scars pre-dated the early 1600s.

The Master Fire Chronology for Colson Creek extends from 1707-1919. The data for this 212 year period revealed about 59 fires, for a Mean Fire Interval (MFI) of 3.6 years. That is, a fire occurred somewhere in the 3000 acre study area on the average of about every 3.6 years.

Eleven major fires occurred in the drainage from 1707-1919 (a major fire is defined here as one which appears to have spread over at least 1000 acres). The resulting MFI for major fires is about 21 years. The years 1863, 1880, and 1919 were noteworthy large-fire years, each having spread over virtually the entire 3000 acre study area (figs. 5-7). These fires probably burned well beyond the artificial boundaries established for the study area, since very steep slopes and relatively dry vegetative types continue to rise for several thousand feet elevation throughout the drainage. The fire maps also suggest that a large percentage of the fires documented burned substantial acreage--1 out of about every 5 fires in the Master Fire Chronology may have exceeded 1000 acres.

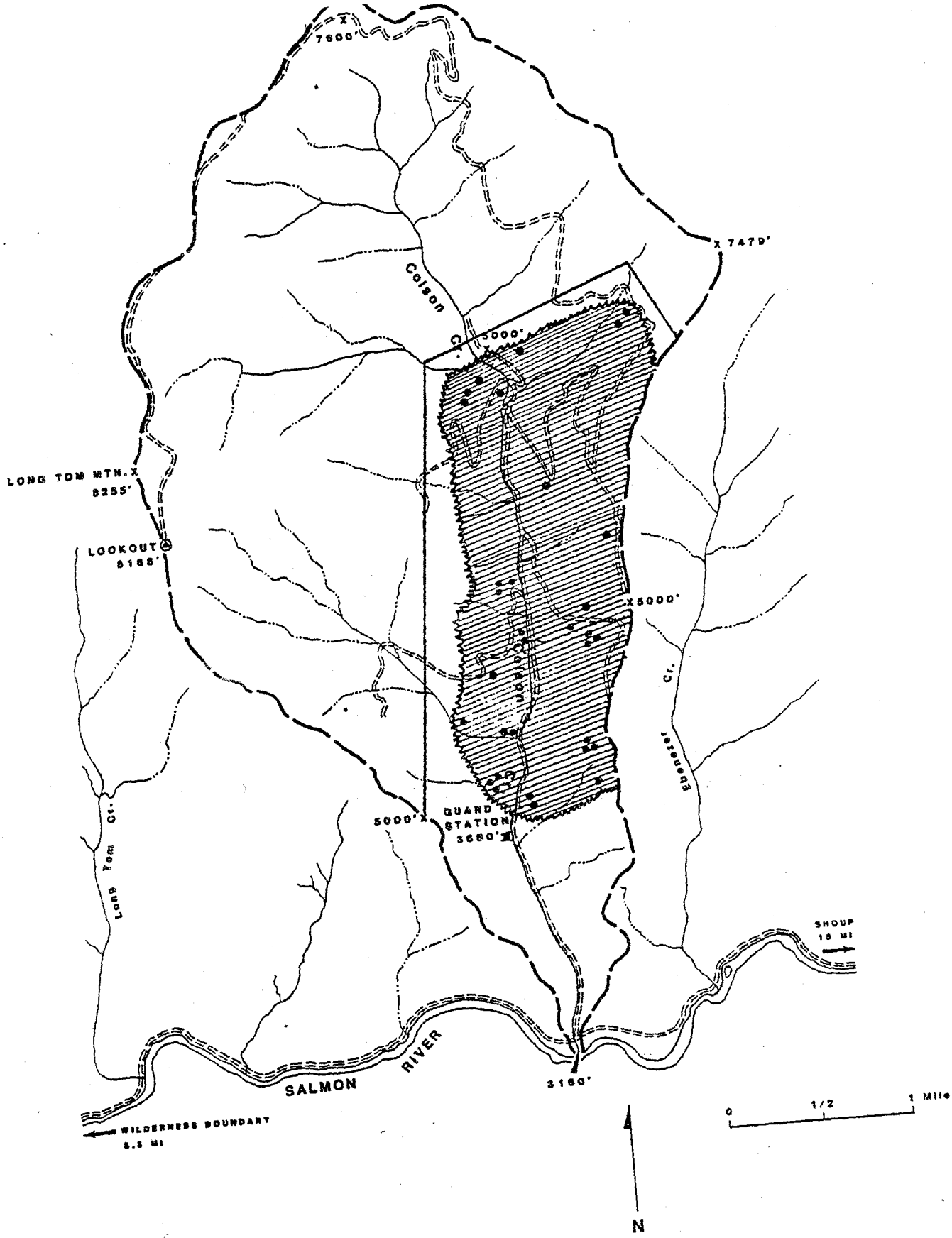


Fig. 5 . 1863 fire.

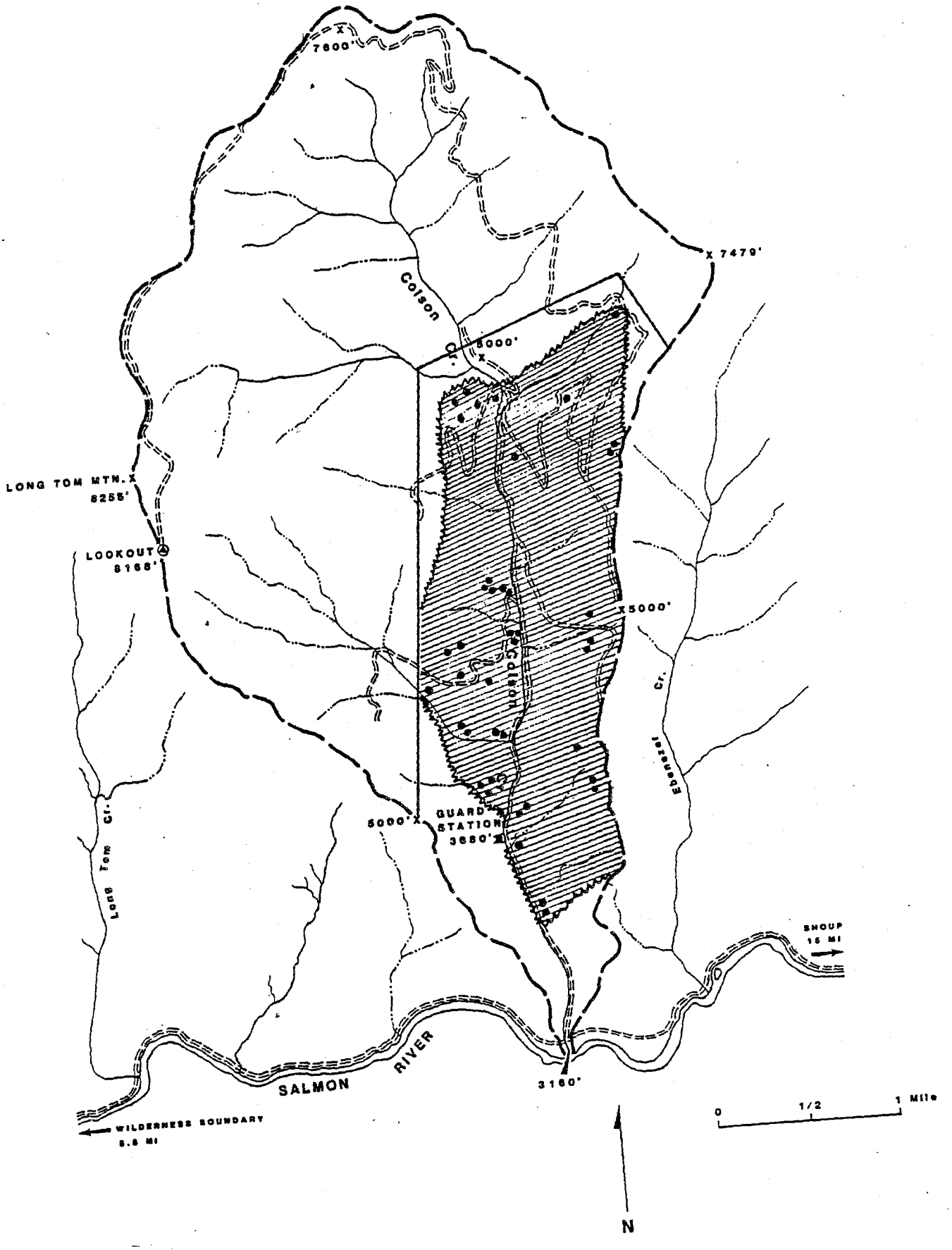


Fig. 6. 1880 fire.

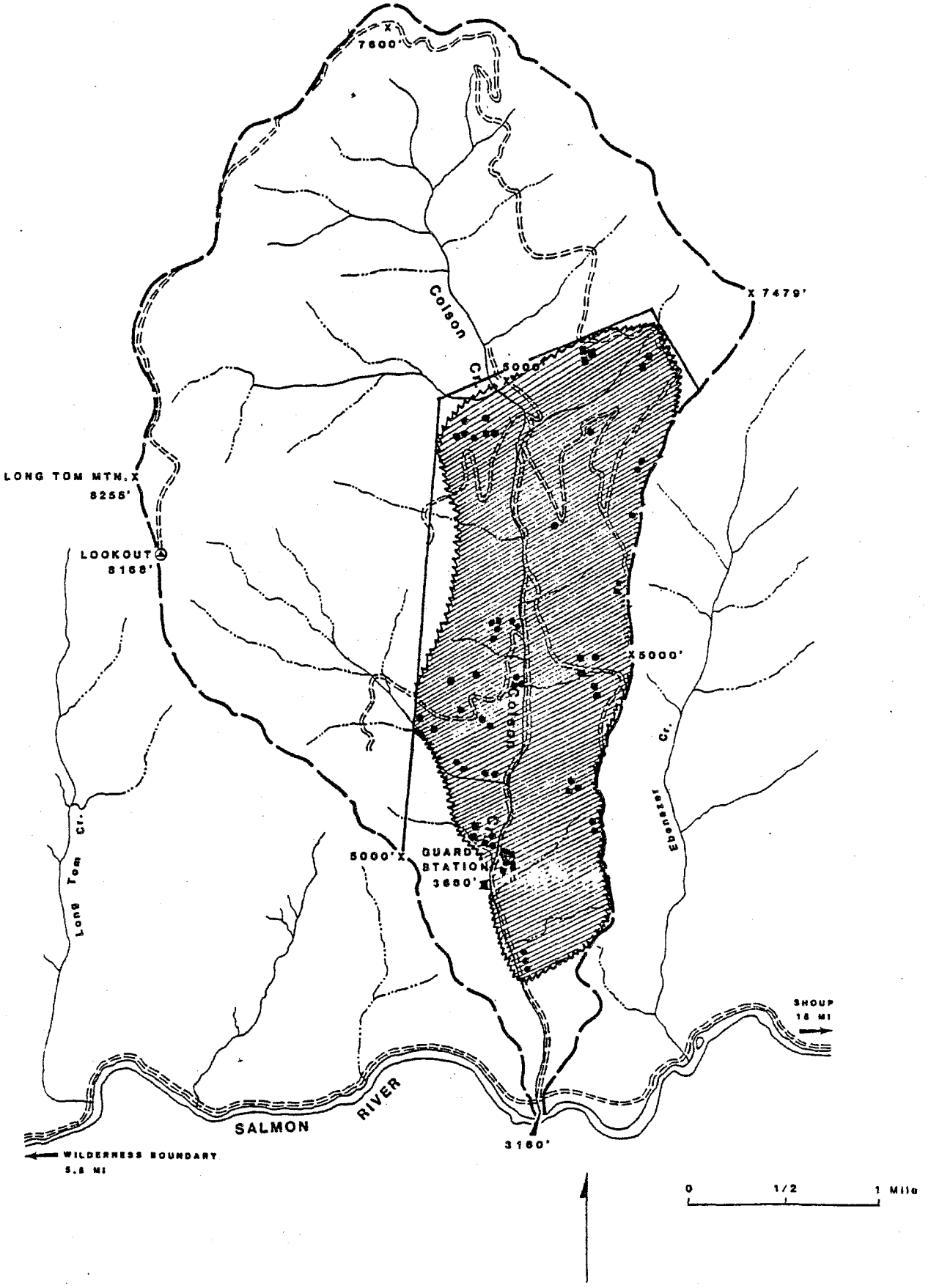


Fig. 7. 1919 fire (●=fire scar sample tree ■=pith sample)

Ten stands of less than 100 acres each were also designated for examination of fire history (fig. 8)(table 1). During the Pre-Fire Suppression Period (pre-1935), MFI's for these 10 stands ranged from about 10-18 years (10-stand mean = 13.8 years). Examination of the ranges of fire intervals for the period reveals that fires typically recurred in a given stand on the average of between 5-28 years. The fire frequencies in stands located on different aspects were also examined for possible differences. Both the MFI's and the ranges of fire intervals were closely similar for most of the stands (no data were obtained for stands having due-north aspects, however). The interpretation here is that fires often burned throughout the lower elevations of the drainage, since relatively dry vegetation can be found on all aspects. There possibly is another factor which contributes to this apparent lack of differences in fire frequencies on different aspects. Frequency estimates for the driest, south- or southwest-facing stands undoubtedly are conservative, since fast-moving grass fires probably would not have always scarred the sample trees.

Data on file for stand age structures verify a historic pattern of very frequent, predominantly surface fires. The 92 pith samples that were collected reveal that the relatively open stands found in this dry study area are highly uneven-aged. It was very difficult to identify any tree age classes in the field. Also, in the laboratory, very few pith dates were found to be readily attributable to a specific fire in a given stand's history. Aerial photographs for Colson Creek show a lack of fire mosaics in the lower elevations of the drainage. Random examination of aerial photographs for other areas of the River Breaks Zone reveals that this pattern is consistent

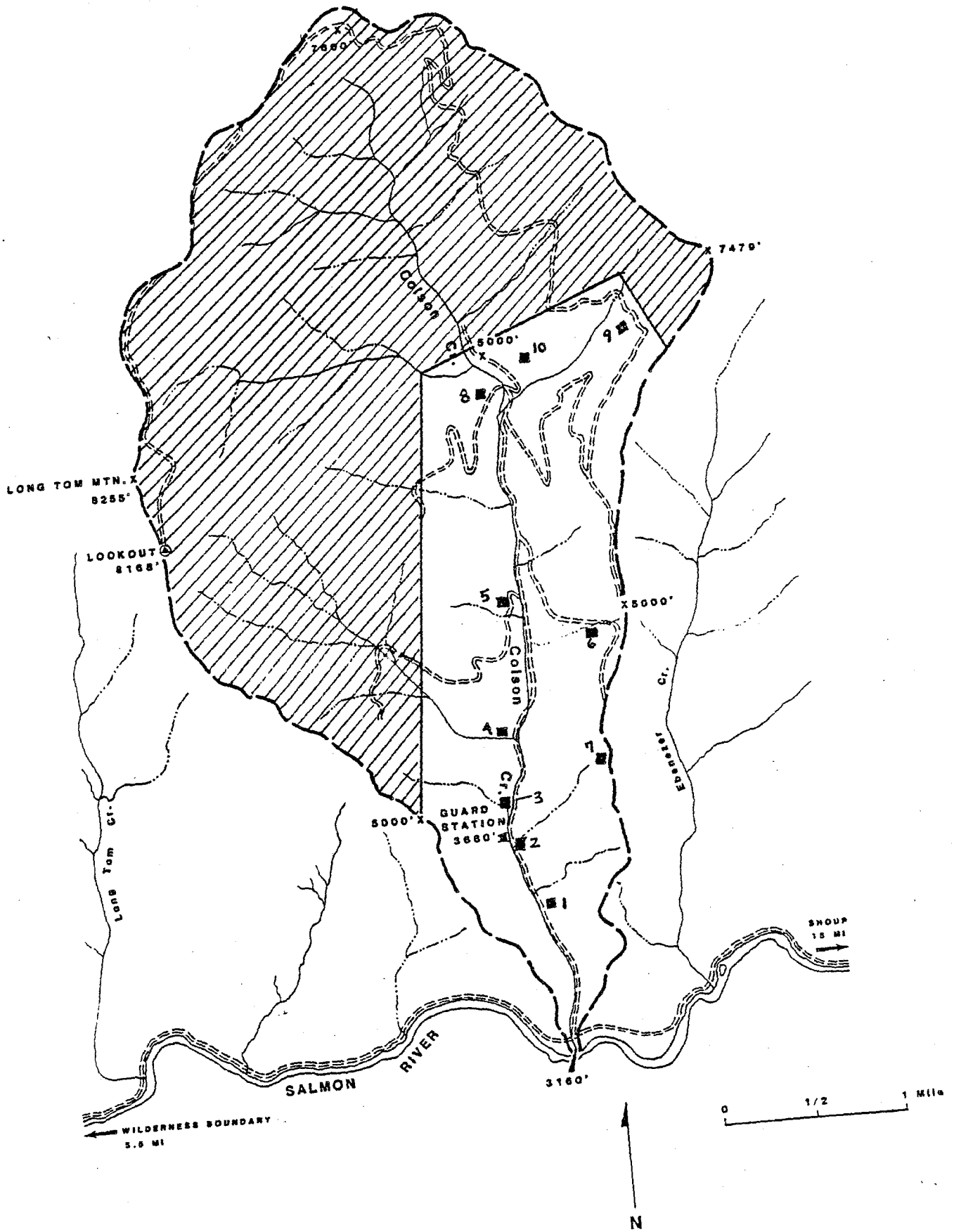


Figure 8. Colson Creek sample stands.

Table 1. Fire history of 10 stands, Pre-Fire Suppression Period (pre-1935), Colson Creek Study Area.

Stand No.[1]	Hab. Type[2]	Aspect	Elev. (ft.)	Master Fire Chronology	No. Fires	Range of Fire Intervals (yrs.)	MFI (yrs.)	Yrs. Since Last Fire[3]
1	Pipo/Agsp	W	3480	1846-1934	6	9-30	17.6	49
2	Pipo/Feid	NW	3800	1735-1934	14	5-30	15.3	49
3	Psme/Syal	E	3820	1805-1919	8	6-30	16.3	64
4	Psme/Syal	S	4040	1793-1919	11	3-23	12.6	43
5	Psme/Syal	E	4400	1694-1919	17	3-26	14.1	64
6	Psme/Caru	W	4660	1666-1919	21	4-35	12.7	64
7	Psme/Agsp	W	4800	1735-1919	15	4-30	13.2	64
8	Psme/Phma	E	5200	1775-1919	11	7-23	14.4	64
9	Psme/Phma	SW	5600	1696-1919	24	3-22	9.7	64
10	Psme/Phma	S	5600	1663-1889	20	3-28	11.9	94
			(Range) 3480-5600			(Mean,Range) 5-28	(Mean) 13.8	(Mean) 61.9

1. Stand locations appear in fig. 8.
2. Abbreviations follow Steele et al. (1981).
3. Sampled in 1983.

throughout the lower elevations of the dry, south-oriented drainages. (As discussed later in the report, this vegetative pattern differs from that found in portions of the other 2 study areas. Even-age age classes, primarily composed of Douglas-fir, can occasionally be found in lower-elevation, north-facing communities. Also, even-age classes are commonly found on northerly aspects above about 5000 feet in the River Breaks Zone.)

During the Fire Suppression Period (1935-1984), an overall lack of fire made it impossible to calculate meaningful MFIs for the 10 stands. The last large fire occurred in the study area 65 years ago, in 1919. After that time, the Fire Atlas of the Salmon National Forest's North Fork Ranger District shows that 2 fires occurred in the 10-year period from 1929-1939. These burned a total of about 600 acres in the study area (or, approximately 1000 acres drainage-wide). Four sample trees in the vicinity of the depicted burn area recorded fires in 1934 and in 1940, suggesting the actual fire years.

The currently long fire-free interval in the study area (10-stand mean: 61.9 years) is unprecedented over at least the last 2 centuries (table 1). These results, which generally agree with those for many of the region's ponderosa pine/Douglas-fir forests (cf. Arno 1980), evidently reflect efficient fire suppression.

Possible successional impacts are today most evident in the more-moist habitat types (these can be found either on northerly aspects or on most aspects above 5000'). For example, data on tree succession in the 10 stands (Appendix A) show a predominance of Douglas-fir regeneration in the understories of stands keying to the Psme/Phma habitat type. The graphs usually show mixed overstories of ponderosa pine and Douglas-fir, however, with ponderosa pine often the stand dominant. Field observations suggest that pockets of ladder fuels, which presumably were not common before 1919 because

of frequent surface fires, now exist in many of the higher elevation stands. In the dry lower elevations, and on southwest aspects above 5000', the stand table graphs reveal that ponderosa pine regeneration is still relatively common despite fire's absence. This is especially true in areas not covered by a heavy litter/duff mantle. Litter accumulation may the most serious result of fire suppression in these dry ecosystems--some plots had litter layers of up to 1 foot deep. Otherwise, aridity is effectively precluding development of dense understory vegetation as well as widespread regeneration of Douglas-fir.

PART II--WILDERNESS SAMPLING:

CHAMBERLAIN/DISAPPOINTMENT STUDY AREA

Study Area

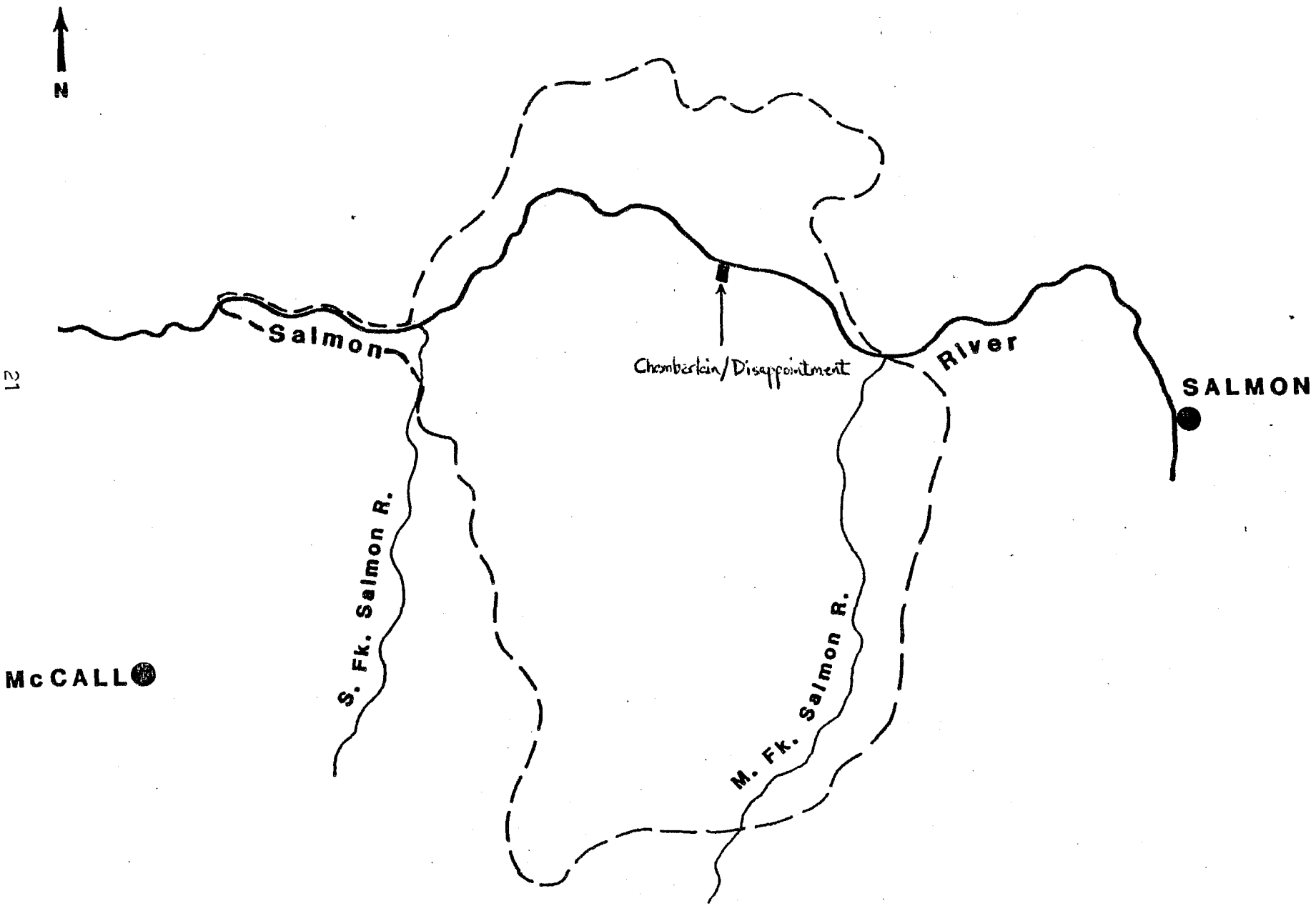
A second study area, this time within the RONR wilderness, was selected for intensive study. Objectives were the same as those described for the Colson Creek study area, except that fire history data was sought from directly within the Wilderness. Also, to keep Wilderness impacts to a minimum, it was decided to collect substantially fewer fire scar samples than were obtained in the Colson Creek study area.

After a preliminary examination of aerial photographs of the Salmon River Canyon, followed by a helicopter reconnaissance, we selected an approximately 4000 acre area located between lower Chamberlain and Disappointment Creeks. This study area is about 13 miles west of the RONR eastern boundary and about 32 miles east of the western boundary (fig. 9). Since ecologically similar areas were available in many areas of the River Breaks Zone, selection of this study area was based primarily upon access considerations (a trail system exists in this area).

The transects were located along the upper slopes and ridgelines of this area, generally at about 6000' elevation. The forests of the area are similar to those in the highest elevations of the Colson Creek study area, where relatively few data were obtained. Thus, selection of the Chamberlain/Disappointment study area afforded a more detailed examination of fire history at the upper limits of the River Breaks Zone.

Southerly aspects in this area support uneven-aged, sparsely forested stands of ponderosa pine (Douglas-fir/bunchgrass h.t.s.). With a change to

Figure 9. Chamberlain/Disappointment study area.



the more-moist aspects, however, there is often a very abrupt shift to densely stocked, uneven-aged stands of Douglas-fir (Douglas-fir/shrub h.t.s.).

Methods

Study methods used for the Chamberlain/Disappointment study area are similar to those described above. The sole exception is in the method of collecting fire scar samples. Because of Wilderness restrictions which ban the use of mechanized equipment, it was necessary to use a crosscut saw to cut wedge samples from fire scarred trees (no trees were felled). We also located the sample trees away from easy viewing by the public, in consideration of aesthetic values.

Results/Discussion

Twenty-seven fire scar samples were obtained from the Chamberlain/Disappointment study area, or, about one-third the number obtained from Colson Creek. Twenty-four samples were obtained from ponderosa pine and 3 were from Douglas-fir. Overall, the sample trees in this area had fewer fire scars per sample than those in Colson Creek, with most trees having fewer than 5 scars (9 was the maximum number found per tree). This is considered to be reflective of elevational differences in fire history between the 2 study areas, rather than any possible artifact of the different sampling techniques. Field observation alone suggested that fires were somewhat less frequent in these upper elevations, as reflected by the fewer numbers of scars found on tree catfaces. (As discussed later in this report, I believe that few data were sacrificed in the Wilderness study areas, even though we used the less efficient method of cutting fire scar samples by crosscut saw).

The Master Fire Chronology for the Chamberlain/Disappointment study area

extends from 1730-1934, or, only 8 years shorter in length than the MFC of Colson Creek (1707-1919). The data for this 204 year period reveal 18 fires, for a study area MFI of about 12 years (Colson Creek: 212 yrs./59 fires/3.6 yr. MFI). That is, a fire occurred in the 4000 acre study area on the average of at least about every 12 years. This longer fire frequency may be representative for the upper elevation forests of the River Breaks Zone. For example, compared to the lower elevations of Colson Creek, there seemed to substantially fewer catfaced trees in Chamberlain/Disappointment, as well as fewer fire scars per tree.

Six major fires occurred in the study area from 1730-1934, resulting in an MFI for major fires of about 41 years (a "major fire" is one which exceeds 1000 acres). By comparison, Colson Creek had 11 major fires over 212 years, for an MFI of about 21 years. In Chamberlain/Disappointment, fires in 1846, 1898, and 1919 were especially noteworthy, scarring 70%, 70%, and 85% of the sample trees, respectively (figs. 10-12). Interestingly, a fire in 1919 also scarred a very large percentage of the sample trees in Colson Creek. (As discussed later in this report, 1919 fire scars also appeared on fire scarred trees sampled along 40 miles of the Salmon River Corridor, which connects these 2 intensive study areas; other fire history studies [cf. Arno 1980, Barrett 1982] have found that 1919 was a severe fire year elsewhere in the region).

As was true for Colson Creek, the fire maps for Chamberlain/Disappointment suggest that many of the fires documented were large--1 out of about every 3 fires in the Master Fire Chronology apparently exceeded 1000 acres. (By comparison, 1 out of about every 5 fires in the Colson Creek Master Fire Chronology exceeded 1000 acres). The interpretation here is that fires were not as frequent in the upper elevations, but many

Figure 10. 1846 fire map.

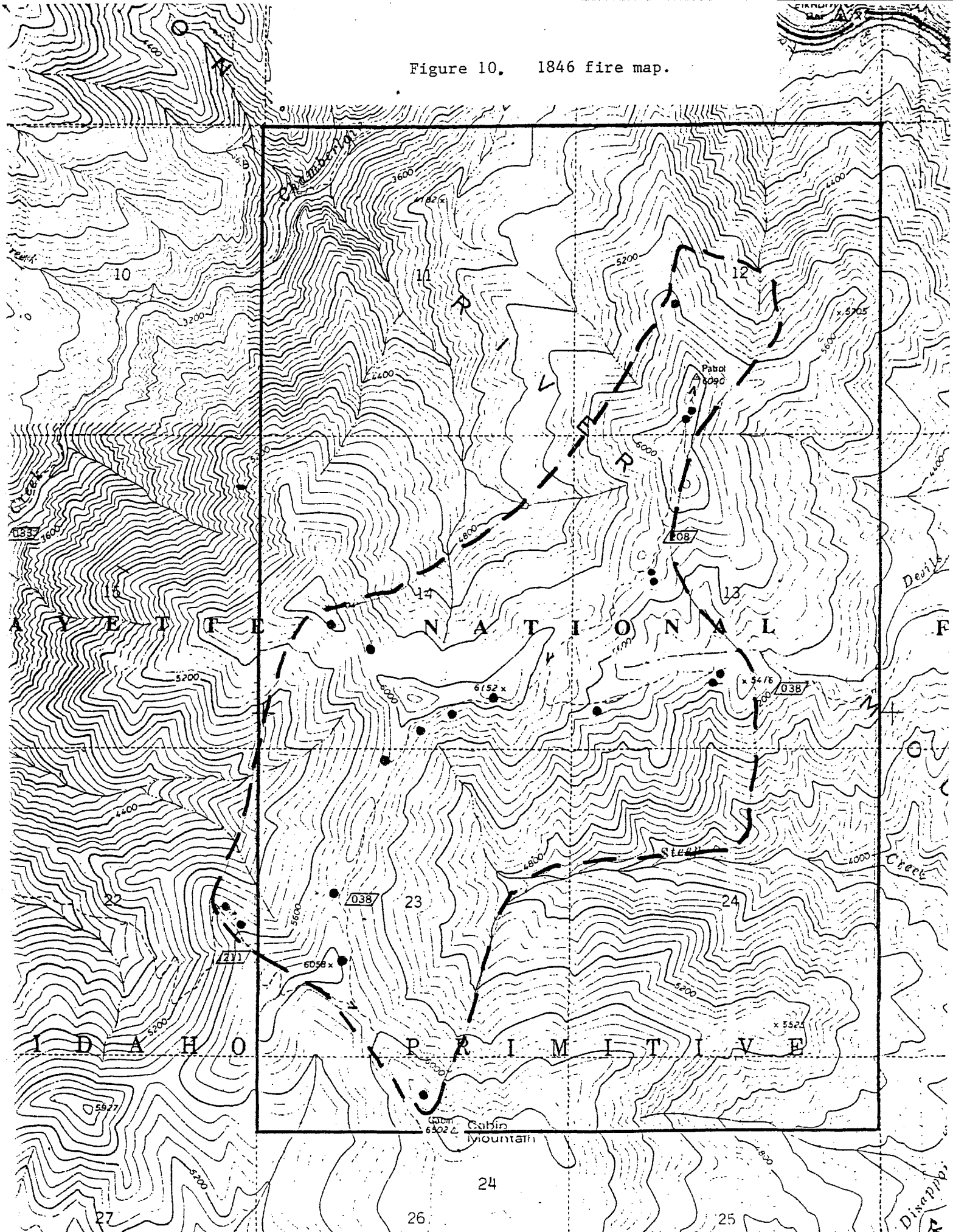


Figure 11. 1898 fire map.

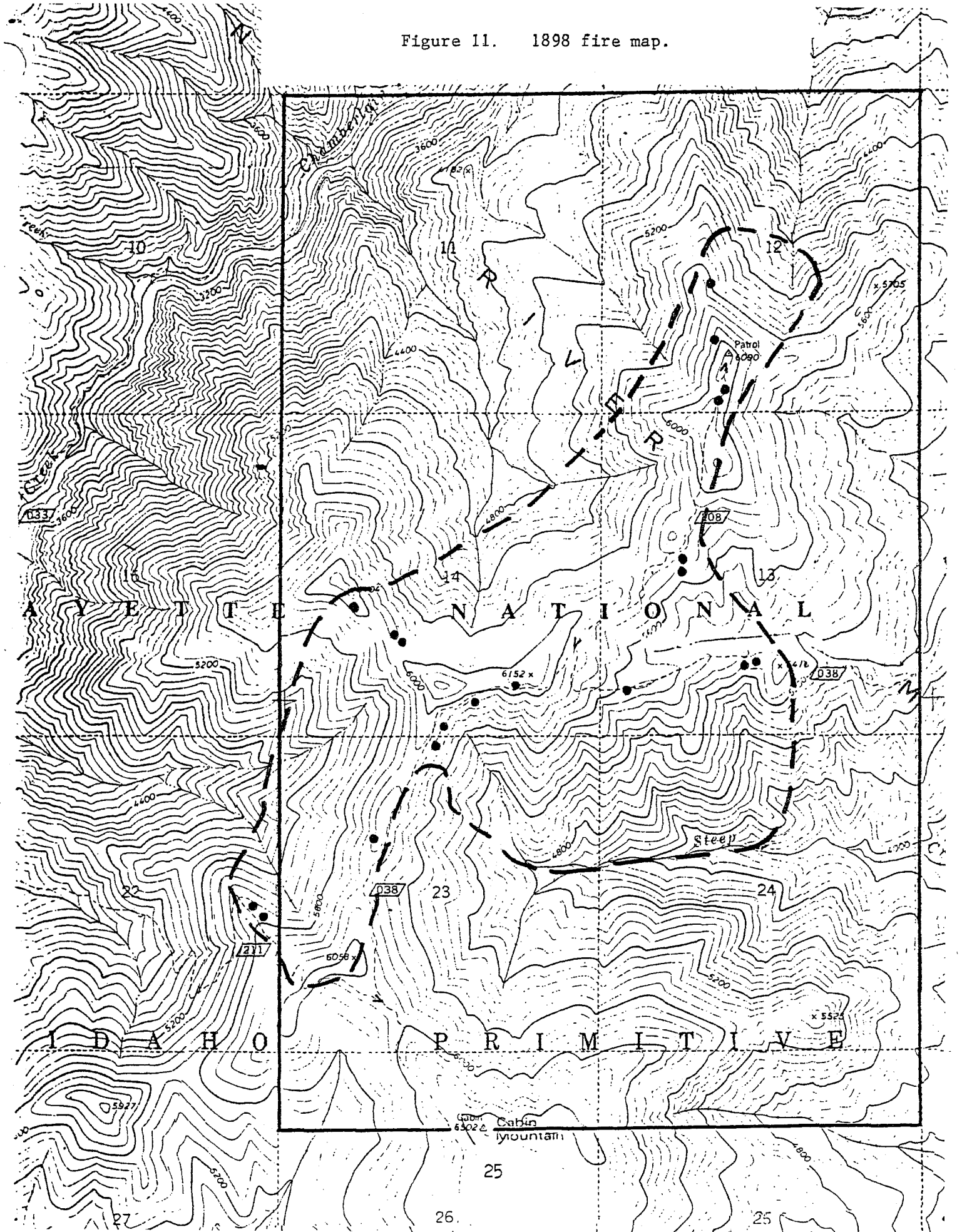
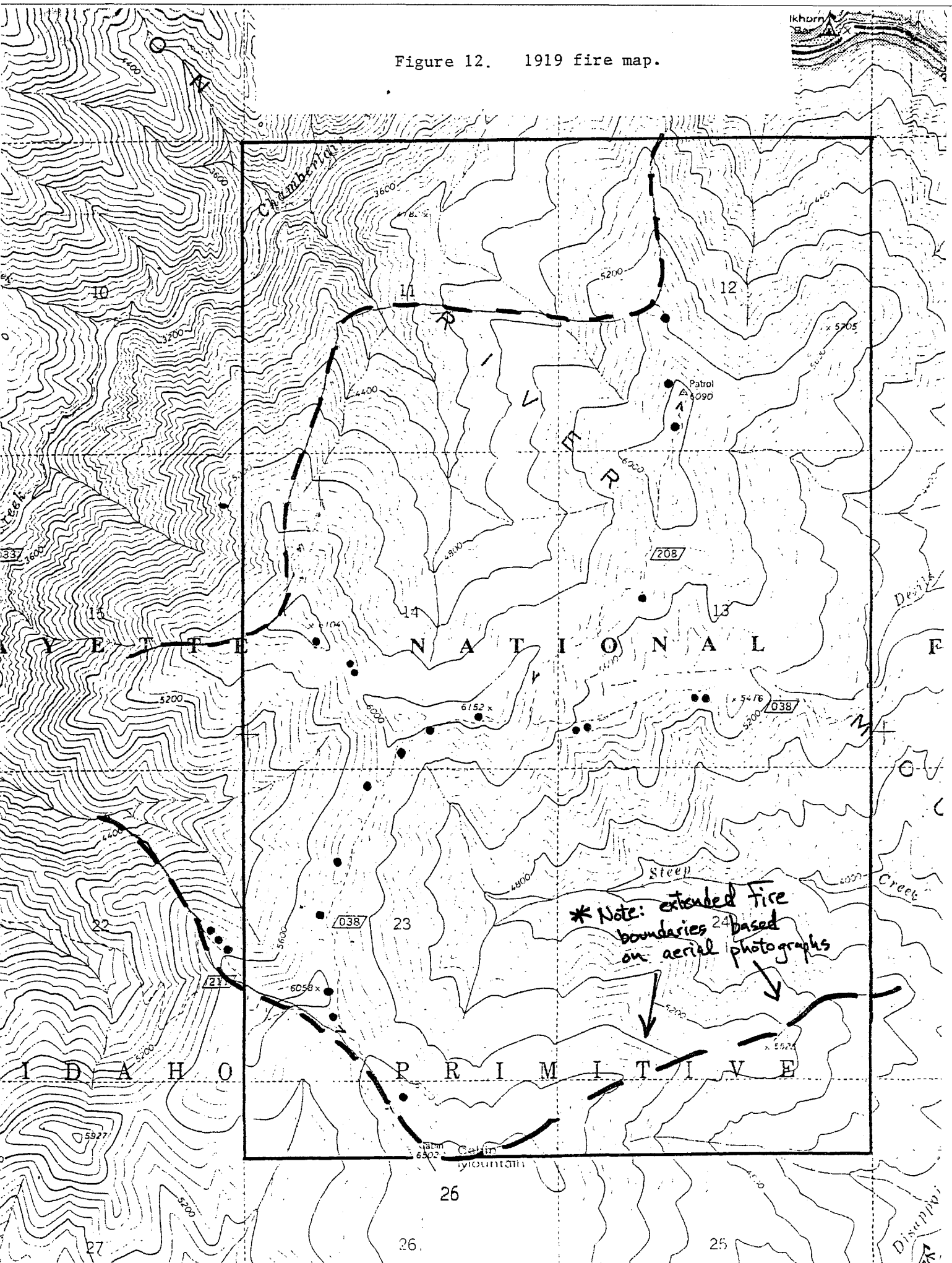


Figure 12. 1919 fire map.



apparently attained large sizes by they had burned to the ridgetops.

Ten stands of less than 100 acres each were also designated for examination of fire history (fig. 13)(table 2). During the Pre-Fire Suppression Period (pre-1935), MFI's for these 10 stands ranged from about 15-36 years (10-stand mean: 22.5 years; Colson Creek: 13.7 years). Examination of the ranges of fire intervals for the period reveals that fires typically recurred in a given stand on the average of between 13-37 years (Colson Creek: 5-27 years). These data seem to support the interpretation that fires were somewhat less frequent in the upper elevations of the River Breaks.

An examination was also made of the fire frequencies found in stands on different aspects. No clear pattern of differences emerged between northerly and southerly aspects (table 2), perhaps because most of the sample trees were cut on the drier aspects. Frequency differences were apparent in the field, however. Catfaced trees were far less common in the moister stands, and those that were found had fewer scars per tree. This suggested that the densely stocked, even-aged Douglas-fir stands that occupy northslopes undoubtedly burned less frequently than did the dry, open ponderosa pine stands.

It also was not possible to obtain data reflecting the frequency of north-slope stand replacement. The very large 1919 fire had replaced stands on virtually all of the north slopes in the area, resulting in a lack of older north-facing communities for which estimates of stand replacement fire frequency could be made.

The 70 pith samples that were obtained reveal sharply different stand structures. These are attributable to historic burning patterns. As was found in Colson Creek, for example, south-oriented stands in Chamberlain/Disappointment are primarily uneven-aged. The open, dry stands

Figure 13. Chamberlain/Disappointment sample stands.

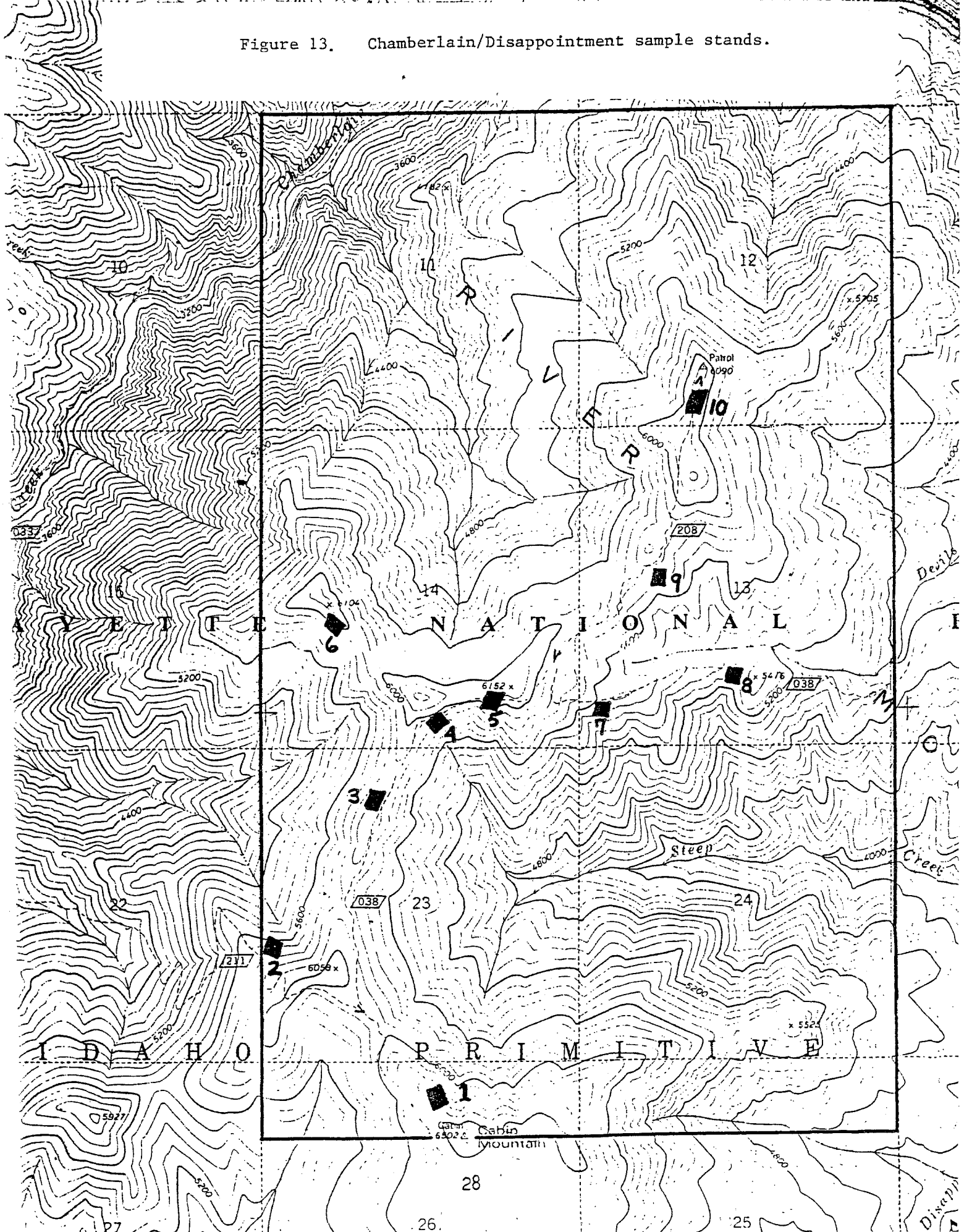


Table 2. Fire history of 10 stands, Pre-Fire Suppression Period (pre-1935), Chamberlain/Disappointment Study Area.

Stand No.[1]	Hab. Type[2]	Aspect	Elev. (ft.)	Master Fire Chronology	No. Fires	Range of Fire Intervals (yrs.)	MFI (yrs.)	Yrs. Since Last Fire[3]
1	Psme/Phma	NE	6000	1846-1934	7	5-32	14.6	50
2	Psme/Phma	NE	5700	1794-1934	8	11-34	20.0	50
3	Psme/Phma	W	5800	1730-1934	11	8-34	20.4	50
4	Psme/Phma	SE	5700	1769-1919	9	8-34	18.7	65
5	Psme/Syal	S	6100	1759-1919	7	18-51	26.6	65
6	Psme/Feid	SW	6000	1846-1919	5	8-28	18.3	65
7	Psme/Syal	SE	5600	1758-1919	10	8-34	17.8	65
8	Psme/Syal	S	5300	1828-1919	5	18-34	22.7	65
9	Psme/Syal	SE	5700	1730-1919	8	18-36	27.0	65
10	Psme/Phma	W	6000	1702-1919	7	21-52	36.2	65
			(Range) 5300-6100			(Mean,Range) 12-37	(Mean) 22.2	(Mean) 60.5

1. Stand locations appear in fig. 13.
2. Abbreviations follow Steele et al. (1981).
3. Sampled in 1984.

were found to have widely distributed tree ages (not readily attributable to specific fire events). With a shift in aspect to the more-moist stands, densely stocked, even-aged forests of Douglas-fir regenerated after the most severe fires, such as in 1919. Fire scarred Douglas-fir exist in some north-facing stands, however, suggesting that fires did not always result in total stand replacement.

Results for the Fire Suppression Period are very similar to those for Colson Creek. First, it was not possible to calculate MFI's for the 49-year period, due to a lack of fires. The last fire of any consequence occurred in the area in 1934, but it evidently was relatively small. As was true for Colson Creek, 1919 was the last major fire year in the Chamberlain/Disappointment area. Similarly, the area's currently long fire-free interval is unprecedented over at least the past 2 centuries (10-stand mean: 60.5 years; Colson Creek: 61.9 years).

The lack of fire over the last 6 decades seems to be resulting in successional changes throughout much of this study area. On the more-moist aspects, tree succession data for the 10 stands (Appendix B) strongly suggest that stand succession is progressing toward eventual domination by Douglas-fir, resulting in stands that are both more densely forested and compositionally different from those found for the Pre-Fire Suppression Period. Ponderosa pine regeneration was absent in most of the plots taken in these stands, although the pines were frequently present in the overstory. As in Colson Creek, however, the very dry, south- or southwest-facing stands still are very sparsely forested, with ponderosa pine essentially the only successfully regenerating species.

PART III--WILDERNESS SAMPLING:
SALMON RIVER CORRIDOR

Study Area

In March 1984, another phase of the sampling was undertaken. A float trip was conducted through the Wild and Scenic River Corridor of the Salmon River, the goal being to obtain a number of spot checks of fire history throughout the large River Breaks zone. The overall objective was to supplement the data from the Colson Creek and Chamberlain/Disappointment study areas, to determine applicability of results to the broader area.

The area selected for sampling was approximately 80 miles of the Salmon River corridor, from Corn Creek to Mackay Bar. Elevations sampled along this length of the canyon range from about 2300-3300'. The river flows from the southeast to the northwest for about two-thirds of this length, then changes its course abruptly to the southwest. Because of the general east-west orientation of the corridor, stands on the north side of the river differ markedly from those on the south side. The very dry, south-facing communities are similar in character to those already described for the lower elevations of the Colson Creek study area, with the stands usually keying to either ponderosa pine/bunchgrass or Douglas-fir/bunchgrass habitat types. The more-moist north-facing communities, even at the canyon bottom's low elevations, are comparable to those described for the Chamberlain/Disappointment study area (primarily Douglas-fir/shrub habitat types). The main exception to this area description is located in the Black Canyon area, where a there is a small inclusion of northern Idaho western redcedar (*Thuja plicata*) or grand fir (*Abies grandis*) habitat types.

Methods

Study methods are similar to those previously described. The main exception is that individual small stands (less than 100 acres each), located at various places along the river corridor, were the sole basis for fire history analysis. During the course of the river float, sample stand selection was essentially random, based primarily on availability of catfaced trees.

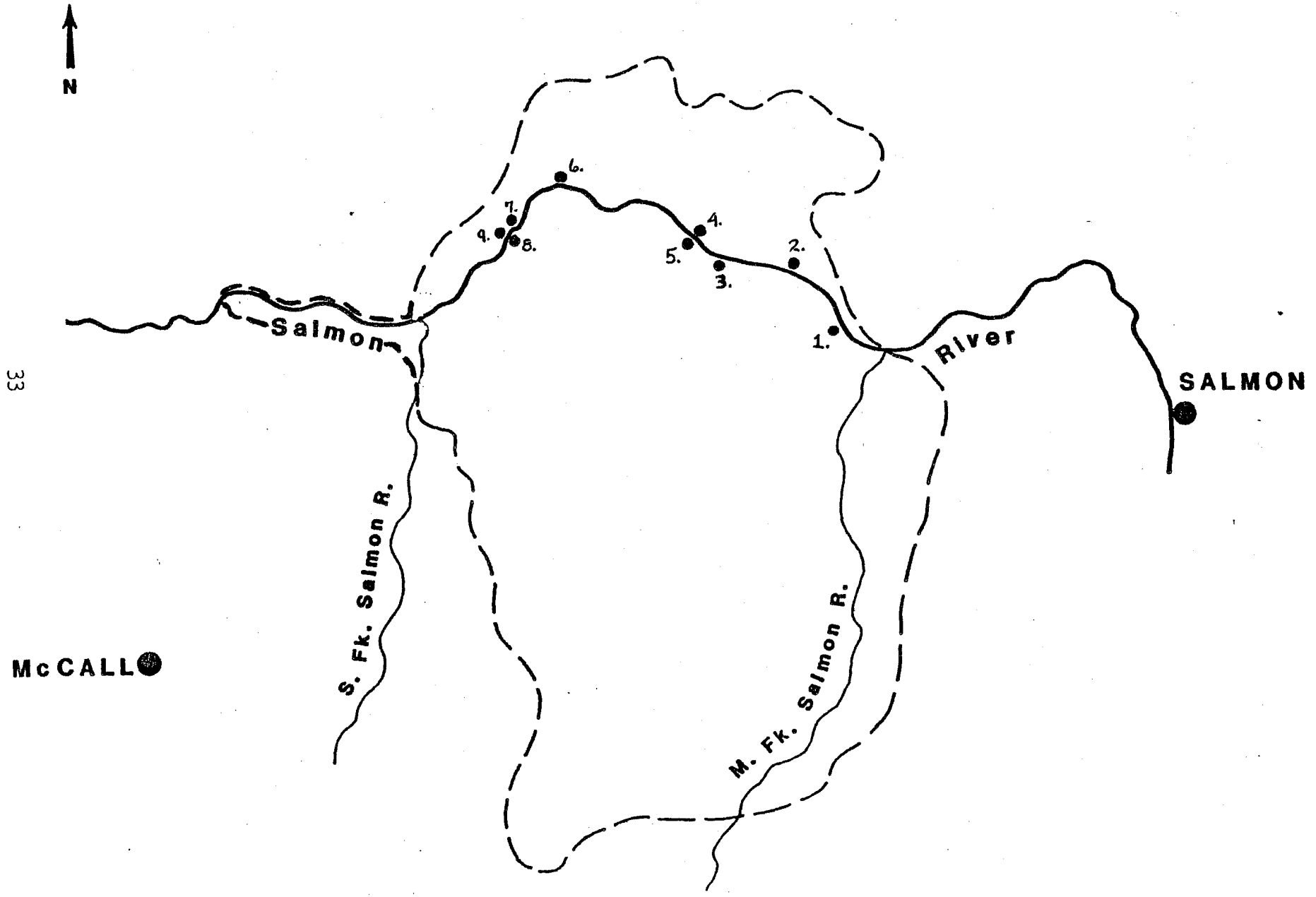
Once a stand selection was made, the fire scar sampling method was the same as that described for the Chamberlain/Disappointment study area. That is, restrictions on the use of mechanized equipment within the Wild and Scenic River Corridor dictated the use of crosscut saws for cutting fire scar samples. It was also decided beforehand that at least 2 sample trees per stand were required for fire history analysis. To minimize Wilderness impacts, no trees were felled and all of the sample trees were located away from easy viewing by the public.

Results/Discussion

Fire history data were obtained from 9 sample stands. These are located in an approximately 40 mile length of the Salmon River corridor, from Killum Point to Groundhog Bar (fig. 14). Five of the sample stands are on the north side of the river, and 4 are on the south side.

Twenty-seven fire scar samples were obtained from the 9 stands. Twenty-six of the samples were from ponderosa pine, and the remaining sample was from a Douglas-fir. Most trees had fewer than 6 fire scars each, however, several trees were found with more than 10 scars each (the maximum number per tree was 14). The earliest fire scar dated to about 1647. As in the 2

Figure 14. Sample stand locations, Salmon River corridor.



intensive study areas, however, relatively few scars pre-dated 1700, resulting in Master Fire Chronologies that are about 2 centuries in length. These results verify that the crosscut saw was adequate for sampling River Breaks fire history.

During the Pre-Fire Suppression Period, mean fire intervals in the 9 stands ranged from 10-48 years (9-stand mean: 19.9 years)(table 3). Examination of the ranges of fire intervals for the period reveals that fires typically recurred in a given stand on the average of between 8-39 years. Interestingly, 5 of the 9 stands experienced fires in 1919, which was found to be a large-fire year in both the Colson Creek and Chamberlain/Disappointment study areas.

An examination was also made of the possible differences in fire occurrence between stands located on opposite sides of the Salmon River Corridor. The average of MFI's for 5 stands on the river's north side was 13.9 years (like many of the lower-elevation stands in the Colson Creek study area, these generally are south-facing stands, very dry and sparsely forested). Conversely, in north-oriented moister stands found on the river's south side, the average of MFI's for 3 stands was 30.9 years (the remaining stand of the 9 is east-facing). This result suggests that fires were substantially less frequent in the River Breaks' north-facing, even in the lower elevations along the canyon bottoms. Further illustrating these apparent fire frequency differences, MFI estimates undoubtedly are conservative for the driest south-facing stands (fast-moving grass fires in the open bunchgrass understories probably would not always have left scars on the sample trees).

The MFI's and tree succession data for the 9 stands (Appendix C) reflect the previously described interpretations about past fire intensities and fire

Table 3-- Fire history of 9 stands, Pre-Fire Suppression Period (pre-1935), Salmon River Corridor.

Stand No.[1] (No. Trees)	Hab. Type[2]	Aspect	Elev. (ft.)	Master Fire Chronology	No. Fires	Range of Fire Intervals (yrs.)	MFI (yrs.)	Yrs. Since Last Fire[3]	Sample Tree No.
1 (N=2)	Psme/Phma	NE	3040	1647-1910	12	9-44	23.9	74	KP 1-2
2 (4)	Pipo/Syor	S	2900	1785-1914	13	3-22	10.8	22	CC 1-4
3 (3)	Psme/Syal	E	2960	1818-1919	7	9-28	16.8	65	CH 1-3
4 (2)	Psme/Agsp	SW	3360	1697-1928	12	10-39	21.0	41	GC 1-2
5 (2)	Psme/Phma	N	3280	1727-1919	5	21-95	48.0	65	GCS 1-2
6 (2)	Psme/Agsp	SE	2800	1847-1924	9	2-20	9.6	60	B 1-2
7 (3)	Psme/Syor	S	2800	1757-1919	14	4-24	12.5	65	JM 1-3
8 (2)	Psme/Phma	NW	2400	1827-1931	6	12-42	20.8	53	GHS 1-2
9 (3)	Psme/Agsp	SE	3000	1687-1919	16	6-35	15.5	65	GHN 1-3
			(Range) 2400-3360			(Mean, Range) 8-39	(Mean) 19.9	(Mean) 56.7	

1. Stand locations appear in fig. 14
2. Abbreviations follow Steele et al. (1981).
3. Sampled in 1984.

effects on stand structure. First, fires were most frequent in the dry, open stands. Virtually all of these were surface fires, leaving many scarred trees, but rarely resulting in significant stand replacement. Ponderosa pine was the primary stand dominant, in a highly uneven-aged regeneration pattern. This pattern differs substantially for the more heavily fueled north-facing stands, primarily Douglas-fir/shrub communities. Aerial photographs and fire reports for the River Breaks indicate that stand-replacing fires have been common on northslopes. The fire scar data further suggest that stand replacement sometimes occurred after 1 or more surface fires in a stand's history. Relatively few data were obtained for old growth, north-facing stands, however, in part because of stand-replacing fires in 1919, so it became difficult to derive estimates for past frequencies of stand-replacement. Trees in northslope sample stands commonly had 1-3 fire scars each, and maximum fire intervals ranged from 42-95 years. The fire scar data thus suggest that an average interval for stand replacing fires might exceed 50 years. Also, Douglas-fir stands more than 150 years old can be found in the River Breaks today, suggesting that stand replacement cycles can exceed 100 years.

Results for the Fire Suppression Period are similar to those for the 2 intensive study areas. First, most stands have not experienced fires in the period since 1935, making it infeasible to calculate MFI's for the period (2 stands had one fire each after 1935). Second, the currently long fire-free interval (9-stand mean: 56.7 years) is again unprecedented over at least the past 2 centuries of fire record. These findings are strikingly similar to those for Colson Creek and Chamberlain/Disappointment, where the current stand fire-free periods averaged 61.9 and 60.5 years respectively.

In the river corridor stands, successional trends during the Fire

Suppression Period appear similar to those documented for the 2 intensive study areas (Appendices A-C). In south-facing stands, aridity seems to be preventing both Douglas-fir encroachment and heavy fuel accumulations; the stands are very sparsely forested and, even in fire's absence, scatterred seedlings of ponderosa pine can be found in many areas. Duff accumulation probably is the most serious result of fire's absence in such stands. On north-facing slopes, however, dense regeneration of Douglas-fir is clearly replacing ponderosa pine in the understories of most stands. In these generally overstocked stands, living and downed fuels also are undoubtedly increasing in the absence of frequent thinning fires.

Conclusion/Discussion

It became evident after examining the fire scar data that little information was sacrificed in the Wilderness study areas, even though we used the less efficient method of sampling by crosscut saw. For example, one result of this sampling is that fewer samples are obtained per given land unit, because the method is far more time-consuming than sampling by chainsaw. We thus expected that a few fires might be missing from the record, because an increase in sample number usually results in a more complete fire chronology (Arno and Peterson 1983). Also, it usually is not possible to cut deeply into sample trees with a crosscut saw, so we expected to miss some of the earliest fire scars in the Wilderness stands.

These assumptions were not always correct, however. For example, 75 samples were cut by chainsaw in the Colson Creek study area. It was later discovered that this was an over-sampling of the area's fire scarred trees. There was very frequent repitition of fire years among the samples, even on samples located some distance apart, reflecting that ignitions in these relatively dry forests apparently often developed into large fires (e.g., 20% of the Colson Creek fires apparently exceeded 1000 acres; 33% exceeded 1000 acres in Chamberlain/Disappointment). The implication here is that fewer sample trees, as were obtained by crosscut, appear adequate for documenting River Breaks fire history.

Also, as expected, chainsaw sampling produced the earliest fire scar dates in the study. However, such scars frequently are so far back in time that they are of little use in compiling Master Fire Chronologies. When we compared the average beginning dates of stand Master Fire Chronologies, for example, little difference emerged between the 3 study areas (Colson Creek: 1751; River Corridor: 1754; Chamberlain/Disappointment: 1776). Therefore,

sacrificing a few very early fire scars seemed to have little effect on the study's results.

Results from the 3 study areas suggest that fire suppression has interupted the historic fire frequencies in some areas of the Salmon River Breaks since about 1930. Large fires have occurred in this century, however, such as in 1919. The fire atlas of Big Creek Ranger District (Payette National Forest) shows that a very large fire in 1931 burned more than 50,000 acres in the Mackay Bar area, in the western portion of the RONR. Also, the 20,000+ acre Corn Creek fire in 1967, a man-caused fire, burned in the northeastern portion of the Salmon River Breaks. Overall, however, study results suggest that a decline in fire occurrence has occurred in many areas, one that cannot be readily attributed to climatic fluctuations. The fire atlases reveal that there have been many lightning ignitions throughout the River Breaks, but most of these have been suppressed before exceeding size class "A" (0-1/4 acres). Also, a study of longterm precipitation effects on tree growth in the region (Laephart and Stage 1968) suggests that a number severe droughts have occurred since the 1930s, so some of these ignitions probably would have developed into spreading fires, essentially continuing the historic fire cycle. Results from tree plots suggest that the current absence of fire probably has not affected succession to any great extent on the arid, sparsely forested southslopes of the River Breaks. In the more-moist, north-oriented communities, however, successional advances are occurring that perhaps were not common before 1900.

LITERATURE CITED

Arno, S. F. 1980. Forest fire history in the Northern Rockies. J. For. 78(8):460-465.

_____, and T. D. Peterson. 1983. Variations in estimates of fire intervals: A closer look at fire history on the Bitterroot National Forest. Res. Pap. INT-301, USDA For. Serv. Intermt. For. and Range Exper. Sta., Ogden, Utah.

_____, and K. M. Sneck. 1977. A method for determining fire history in coniferous forests of the mountain West. Gen. Tech. Rep. INT-42, USDA For. Serv. Intermt. For. and Range Exper. Sta., Ogden, Utah.

Barrett, S. W. 1982. Fire's influence on ecosystems of the Clearwater National Forest: Cook Mountain Fire History Inventory. USDA For. Serv. Clearwater National Forest, Orofino, Idaho.

Laephart, C. D., and A. R. Stage. 1968. Climate: A factor in the origin of pole blight disease of *Pinus monticola* Dougl. Ecol. 52: 229-239.

Steele, R., R. D. Pfister, R. A. Ryker, and J. A. Kittams. 1981. Forest habitat types of central Idaho. Gen. Tech. Rep. INT-114, USDA For. Serv. Intermt. For. and Range Exper. Sta., Ogden, Utah.

APPENDIX A

Tree Succession and Habitat Type Data for 10 Stands, Colson Creek Study Area.

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Colson Cr. Stand 1

Central Idaho habitat type field form

Name

Date

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	3400	3400	3400
Aspect	W	WSW	W
Slope (%)	80	70	80
Topography	4	4	4
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

	TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1.	Abies grandis	ABGR	grand fir			
2.	Abies lasiocarpa	ABLA	subalpine fir			
3.	Larix occidentalis	LAOC	western larch			
4.	Picea engelmannii	PIEN	Engelmann spruce			
5.	Pinus albicaulis	PIAL	whitebark pine			
6.	Pinus contorta	PICO	lodgepole pine			
7.	Pinus flexilis	PIFL	limber pine			
8.	Pinus ponderosa	PIPO	ponderosa pine	1/1/2	T/1/2	T/T/1
9.	Pseudotsuga menziesii	PSME	Douglas-fir	0/0/0		
10.	Populus tremuloides	POTR	quaking aspen			
	SHRUBS AND VINES					
1.	Acer glabrum	ACGL	mountain maple			
2.	Alnus sinuata	ALSI	mountain alder			
3.	Artemisia tridentata	ARTR	big sagebrush			
4.	Berberis repens (+ aquifolium)	BERE	Oregon grape			
5.	Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany	2	1	T
6.	Clematis columbiana	CLCO	rock clematis			
7.	Holodiscus discolor	HODI	ocean-spray			
8.	Juniperus communis	JUCO	common juniper			
9.	Ledum glandulosum	LEGL	Labrador tea			
10.	Linnaea borealis	LIBO	twinflower			
11.	Menziesia ferruginea	MEFE	menziesia			
12.	Physocarpus malvaceus	PHMA	ninebark			
13.	Prunus virginiana	PRVI	chokecherry			
14.	Purshia tridentata	PUTR	bitterbrush			
15.	Ribes cereum	RICE	squaw currant			
16	Ribes montigenum	RIMO	mountain gooseberry			
17.	Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18.	Symphoricarpos albus	SYAL	common snowberry			
19.	Symphoricarpos oreophilus	SYOR	mountain snowberry			
20.	Vaccinium caespitosum	VACA	dwarf huckleberry			
21.	Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22.	Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
	GRAMINOIDS					
1.	Agropyron spicatum	AGSP	bluebunch wheatgrass	3	3	3
2.	Calamagrostis rubescens	CARU	pinegrass			
3.	Calamagrostis canadensis	CACA	bluejoint			
4.	Carex disperma	CADI	soft-leaved sedge			
5.	Carex geyeri	CAGE	elk sedge			
6.	Festuca idahoensis	FEID	Idaho fescue			
7.	Hesperochloa kingii	HEKI	spikefescue			
8.	Luzula hitchcockii	LUHI	smooth woodrush			
9.	Stipa occidentalis	STOC	western needlegrass			
	FORBS, FERNS, AND FERN ALLIES					
1.	Actaea rubra	ACRU	baneberry			
2.	Adenocaulon bicolor	ADBI	trail-plant			
3.	Arnica cordifolia	ARCO	heartleaf arnica			
4.	Astragalus miser	ASMI	weedy milkvetch			
5.	Caltha biflora	CABI	twinflower marsh marigold			
6.	Clintonia uniflora	CLUN	queencup beadlily			
7.	Coptis occidentalis	COOC	western goldthread			
8.	Disporum trachycarpum	DITR	sierra fairybell			
9.	Equisetum arvense	EQAR	common horsetail			
10.	Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11.	Ligusticum canbyi	LICA	Canby's ligusticum			
12.	Osmorhiza chilensis	OSCH	mountain sweet-root			
13.	Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14.	Senecio triangularis	SETR	arrowleaf groundsel			
15.	Streptopus amplexifolius	STAM	twisted stalk			
16.	Trautvetteria caroliniensis	TRCA	false bugbane			
17.	Xerophyllum tenax	XETE	beargrass			

Series	Pipo	"	"
Habitat type	Agsp		
Phase	5		

Mahogany Stand nearby

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Colson Cr. Stand 2

Central Idaho habitat type field form

Name

Date

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

	a	b	c
Plot No.			
Location			
T. R.			
Section			
Elevation	3600	3920	3600
Aspect	W	W-NW	W
Slope (%)	5	70	70
Topography	5-6	4	4
Configuration	2-1	1	1

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy Coverage a	Canopy Coverage b	Canopy Coverage c	Class a	Class b	Class c
1. Abies grandis	ABGR	grand fir						
2. Abies lasiocarpa	ABLA	subalpine fir						
3. Larix occidentalis	LAOC	western larch						
4. Picea engelmannii	PIEN	Engelmann spruce						
5. Pinus albicaulis	PIAL	whitebark pine						
6. Pinus contorta	PICO	lodgepole pine						
7. Pinus flexilis	PIFL	limber pine						
8. Pinus ponderosa	PIPO	ponderosa pine	2	1	T	2	3	2
9. Pseudotsuga menziesii	PSME	Douglas-fir	2			0		
10. Populus tremuloides	POTR	quaking aspen						
SHRUBS AND VINES								
1. Acer glabrum	ACGL	mountain maple						
2. Alnus sinuata	ALSI	mountain alder						
3. Artemisia tridentata	ARTR	big sagebrush						
4. Berberis repens (+ aquifolium)	BERE	Oregon grape	T			T		T
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany						
6. Clematis columbiana	CLCO	rock clematis						
7. Holodiscus discolor	HODI	ocean-spray						
8. Juniperus communis	JUCO	common juniper						
9. Ledum glandulosum	LEGL	Labrador tea						
10. Linnaea borealis	LIBO	twinflower						
11. Menziesia ferruginea	MEFE	menziesia						
12. Physocarpus malvaceus	PHMA	ninebark						
13. Prunus virginiana	PRVI	chokecherry						
14. Purshia tridentata	PUTR	bitterbrush						
15. Ribes cereum	RICE	squaw current						
16. Ribes montigenum	RIMO	mountain gooseberry						
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea		1	T			
18. Symphoricarpos albus	SYAL	common snowberry		2	T			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry						
20. Vaccinium caespitosum	VACA	dwarf huckleberry						
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry						
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry						
GRAMINOIDS								
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	1	1	1			
2. Calamagrostis rubescens	CARU	pinegrass						
3. Calamagrostis canadensis	CACA	bluejoint						
4. Carex disperma	CADI	soft-leaved sedge						
5. Carex geyeri	CAGE	elk sedge						
6. Festuca idahoensis	FEID	Idaho fescue	2	4	2			
7. Hesperochloa kingii	HEKI	spikefescue						
8. Luzula hitchcockii	LUHI	smooth woodrush						
9. Stipa occidentalis	STOC	western needlegrass						
FORBS, FERNS, AND FERN ALLIES								
1. Actaea rubra	ACRU	baneberry						
2. Adenocaulon bicolor	ADBI	trail-plant						
3. Arnica cordifolia	ARCO	heartleaf arnica						
4. Astragalus miser	ASMI	weedy milkvetch						
5. Caltha biflora	CABI	twinflower marsh marigold						
6. Clintonia uniflora	CLUN	queencup beadlily						
7. Coptis occidentalis	COOC	western goldthread						
8. Disporum trachycarpum	DITR	sierra fairybell						
9. Equisetum arvense	EQAR	common horsetail						
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine						
11. Ligusticum canbyi	LICA	Canby's ligusticum						
12. Osmorhiza chilensis	OSCH	mountain sweet-root						
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon						
14. Senecio triangularis	SETR	arrowleaf groundsel						
15. Streptopus amplexifolius	STAM	twisted stalk						
16. Trautvetteria caroliniensis	TRCA	false bugbane						
17. Xerophyllum tenax	XETE	beargrass						

Fesc also

	a	b	c
Series	Pipo	"	"
Habitat type	Feid		
Phase			

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Edson Cr. Stand 3

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	3820	3900	3900
Aspect	E	E	E
Slope (%)	Flat	–	–
Topography	5-6	5-6	5-6
Configuration	2-3	–	–

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	1/2/3	T/2/2	T/T/T
9. Pseudotsuga menziesii	PSME	Douglas-fir	2/2/L	2/3/2	2/2/2
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple	T	T	T
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape	2	1	1
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	1	1	T
18. Symphoricarpos albus	SYAL	common snowberry	3	1	1
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	4	2	3
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
		Series	Pimo	"	"
		Habitat type	Sygl		
		Phase			

Riparian Zone

Colson Cr.
Stand 4

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	4020	4000	4090
Aspect	SE	E	SE
Slope (%)	60	60	60
Topography	4	4	4
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy Coverage		Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	2	2	2
9. Pseudotsuga menziesii	PSME	Douglas-fir	2	1	1
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple	T		
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape	1	1	1
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	2	1	1
18. Symphoricarpos albus	SYAL	common snowberry	3	1	1
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	1	1	1
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's pesvine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	Psme	"	"
Habitat type	Syal	"	"
Phase			

→ Psme Riparian Zone

Colson Cr. Stand 5

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	4200	4480	4360
Aspect	E	E	E
Slope (%)	60	70	60
Topography	4-5	4	4
Configuration			

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	1 2 3	1 1 2	T 2 2
9. Pseudotsuga menziesii	PSME	Douglas-fir	2 1 2 a	T T T	T T T
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16 Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry	1	1	1
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	3	2	2
6. Festuca idahoensis	FEID	Idaho fescue	2	2	2
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	Psme	Psme	"
Habitat type	Syal	Syal	
Phase			

→ near Riparian

Colson Cr.
Stand 6

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	4600	4770	4900
Aspect	SW	NW	W
Slope (%)	70	70	70
Topography	3	3	3
Configuration	1	1-2	1

→ Tree classes: 0-4", 5-20, 20+

	Abbrev.	Common Name	Canopy Coverage	Class
TREES				
1. Abies grandis	ABGR	grand fir		
2. Abies lasiocarpa	ABLA	subalpine fir		
3. Larix occidentalis	LAOC	western larch		
4. Picea engelmannii	PIEN	Engelmann spruce		
5. Pinus albicaulis	PIAL	whitebark pine		
6. Pinus contorta	PICO	lodgepole pine		
7. Pinus flexilis	PIFL	limber pine		
8. Pinus ponderosa	PIPO	ponderosa pine	1 1 2 / 2 2 3	1 1 2
9. Pseudotsuga menziesii	PSME	Douglas-fir	2 2 2	T T T
10. Populus tremuloides	POTR	quaking aspen		
SHRUBS AND VINES				
1. Acer glabrum	ACGL	mountain maple		
2. Alnus sinuata	ALSI	mountain alder		
3. Artemisia tridentata	ARTR	big sagebrush		
4. Berberis repens (+ aquifolium)	BERE	Oregon grape		T
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany		
6. Clematis columbiana	CLCO	rock clematis		
7. Holodiscus discolor	HODI	ocean-spray		
8. Juniperus communis	JUCO	common juniper		
9. Ledum glandulosum	LEGL	Labrador tea		
10. Linnaea borealis	LIBO	twinflower		
11. Menziesia ferruginea	MEFE	menziesia		
12. Physocarpus malvaceus	PHMA	ninebark		
13. Prunus virginiana	PRVI	chokecherry		
14. Purshia tridentata	PUTR	bitterbrush		
15. Ribes cereum	RICE	squaw currant		
16. Ribes montigenum	RIMO	mountain gooseberry		
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea		
18. Symphoricarpos albus	SYAL	common snowberry		
19. Symphoricarpos oreophilus	SYOR	mountain snowberry		
20. Vaccinium caespitosum	VACA	dwarf huckleberry		
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry		
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry		
GRAMINOIDS				
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	3	2
2. Calamagrostis rubescens	CARU	pinegrass	4	2
3. Calamagrostis canadensis	CACA	bluejoint		
4. Carex disperma	CADI	soft-leaved sedge		
5. Carex geyeri	CAGE	elk sedge	2	L
6. Festuca idahoensis	FEID	Idaho fescue	3 3	L
7. Hesperochloa kingii	HEKI	spikefescue		
8. Luzula hitchcockii	LUHI	smooth woodrush		
9. Stipa occidentalis	STOC	western needlegrass		
FORBS, FERNS, AND FERN ALLIES				
1. Actaea rubra	ACRU	baneberry		
2. Adenocaulon bicolor	ADBI	trail-plant		
3. Arnica cordifolia	ARCO	heartleaf arnica		
4. Astragalus miser	ASMI	weedy milkvetch		
5. Caltha biflora	CABI	twinflower marsh marigold		
6. Clintonia uniflora	CLUN	queencup beadlily		
7. Coptis occidentalis	COOC	western goldthread		
8. Disporum trachycarpum	DITR	sierra fairybell		
9. Equisetum arvense	EQAR	common horsetail		
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine		
11. Ligusticum canbyi	LICA	Canby's ligusticum		
12. Osmorhiza chilensis	OSCH	mountain sweet-root		
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon		
14. Senecio triangularis	SETR	arrowleaf groundsel		
15. Streptopus amplexifolius	STAM	twisted stalk		
16. Trautvetteria caroliniensis	TRCA	false bugbane		
17. Xerophyllum tenax	XETE	beargrass		

Series	Pipo	Psme	Psme
Habitat type	Feid	Caru	Caru
Phase			

Very open stand

relatively moist

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Colson Cr. Stand 7

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	4800	4760	4800
Aspect	W	W	W
Slope (%)	70	70	70
Topography	2-3	2-3	2-3
Configuration			

→ Tree classes: 0-4", 5-20, 20+

	TREES	Abbrev.	Common Name	Canopy Coverage		Class	
1.	Abies grandis	ABGR	grand fir				
2.	Abies lasiocarpa	ABLA	subalpine fir				
3.	Larix occidentalis	LAOC	western larch				
4.	Picea engelmannii	PIEN	Engelmann spruce				
5.	Pinus albicaulis	PIAL	whitebark pine				
6.	Pinus contorta	PICO	lodgepole pine				
7.	Pinus flexilis	PIFL	limber pine				
8.	Pinus ponderosa	PIPO	ponderosa pine	1/2/3	T/1/1	T/1/2	
9.	Pseudotsuga menziesii	PSME	Douglas-fir	T/0/0	T/0/0	T/0/0	
10.	Populus tremuloides	POTR	quaking aspen				
	SHRUBS AND VINES						
1.	Acer glabrum	ACGL	mountain maple				
2.	Alnus sinuata	ALSI	mountain alder				
3.	Artemisia tridentata	ARTR	big sagebrush				
4.	Berberis repens (+ aquifolium)	BERE	Oregon grape				
5.	Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany	T	T		
6.	Clematis columbiana	CLCO	rock clematis				
7.	Holodiscus discolor	HODI	ocean-spray				
8.	Juniperus communis	JUCO	common juniper				
9.	Ledum glandulosum	LEGL	Labrador tea				
10.	Linnaea borealis	LIBO	twinflower				
11.	Menziesia ferruginea	MEFE	menziesia				
12.	Physocarpus malvaceus	PHMA	ninebark			T	(Accide
13.	Prunus virginiana	PRVI	chokecherry				
14.	Purshia tridentata	PUTR	bitterbrush				
15.	Ribes cereum	RICE	squaw current				
16.	Ribes montigenum	RIMO	mountain gooseberry				
17.	Spiraea betulifolia (+ pyramidata)	SPBE	white spirea				
18.	Symphoricarpos albus	SYAL	common snowberry			T	
19.	Symphoricarpos oreophilus	SYOR	mountain snowberry				
20.	Vaccinium caespitosum	VACA	dwarf huckleberry				
21.	Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry				
22.	Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry				
	GRAMINOIDS						
1.	Agropyron spicatum	AGSP	bluebunch wheatgrass	L	L		
2.	Calamagrostis rubescens	CARU	pinegrass				
3.	Calamagrostis canadensis	CACA	bluejoint				
4.	Carex disperma	CADI	soft-leaved sedge				
5.	Carex geyeri	CAGE	elk sedge				
6.	Festuca idahoensis	FEID	Idaho fescue	1	1		
7.	Hesperochloa kingii	HEKI	spikefescue				
8.	Luzula hitchcockii	LUHI	smooth woodrush				
9.	Stipa occidentalis	STOC	western needlegrass				
	FORBS, FERNS, AND FERN ALLIES						
1.	Actaea rubra	ACRU	baneberry				
2.	Adenocaulon bicolor	ADBI	trail-plant				
3.	Arnica cordifolia	ARCO	heartleaf arnica				
4.	Astragalus miser	ASMI	weedy milkvetch				
5.	Caltha biflora	CABI	twinflower marsh marigold				
6.	Clintonia uniflora	CLUN	queencup beadlily				
7.	Coptis occidentalis	COOC	western goldthread				
8.	Disporum trachycarpum	DITR	sierra fairybell				
9.	Equisetum arvense	EQAR	common horsetail				
10.	Lathyrus nevadensis cusickii	LANC	Cusick's pesvine				
11.	Ligusticum canbyi	LICA	Canby's ligusticum				
12.	Osmorhiza chilensis	OSCH	mountain sweet-root				
13.	Penstemon wilcoxii	PEWI	Wilcox's penstemon				
14.	Senecio triangularis	SETR	arrowleaf groundsel				
15.	Streptopus amplexifolius	STAM	twisted stalk				
16.	Trautvetteria caroliniensis	TRCA	false bugbane				
17.	Xerophyllum tenax	XETE	beargrass				

Series	Pewi	"	"
Habitat type	Agsp	"	Syal
Phase			

Colson Cr. Stand 8

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	4840	5080	5490
Aspect	E	E	E
Slope (%)	5	70	80
Topography	5-6	4	4-3
Configuration	3	1	1

→ Tree classes: 0-4", 5-20, 20+

	Abbrev.	Common Name	Canopy	Coverage	Class
TREES					
1. Abies grandis	ABGR	grand fir	2/2/T	1/1/1	1/1/1
2. Abies lasiocarpa	ABLA	subalpine fir	T/0/0	1/1/1	1/1/1
3. Larix occidentalis	LAOC	western larch		1/1/1	1/1/1
4. Picea engelmannii	PIEN	Engelmann spruce	2/2/2	1/1/1	1/1/1
5. Pinus albicaulis	PIAL	whitebark pine		1/1/1	1/1/1
6. Pinus contorta	PICO	lodgepole pine		1/1/1	1/1/1
7. Pinus flexilis	PIFL	limber pine		1/1/1	1/1/1
8. Pinus ponderosa	PIPO	ponderosa pine	0/T/0	0/2/2	T/T/5
9. Pseudotsuga menziesii	PSME	Douglas-fir	2/2/1	3/2/1	3/2/2
10. Populus tremuloides	POTR	quaking aspen	1/1/1	1/1/1	1/1/1
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple	3		
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape		T	1
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower	4		
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark	3	4	2
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry	2	2	
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea		2	1
18. Symphoricarpos albus	SYAL	common snowberry	2		
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			2
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			
2. Calamagrostis rubescens	CARU	pinegrass	3		3
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	3	4	3
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant	2		
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	Abla	Psme	"
Habitat type	Libo	Phma	
Phase			

Riparian

Typical mid- upper elev. Riparian h.t.

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Colson Cr. Stand 9

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	5820	5800	5860
Aspect	S	WSW	S
Slope (%)	80	80	80
Topography	3-2	3-2	3-2
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	2/2/3	1/1/3	2/1/3
9. Pseudotsuga menziesii	PSME	Douglas-fir	3/2/1	2/2/1	2/2/2
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape	T	T	T
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark		1	T
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	3	2	2
2. Calamagrostis rubescens	CARU	pinegrass	2	2	2
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	3	1	1
6. Festuca idahoensis	FEID	Idaho fescue	2		1
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	PSMA	"	"
Habitat type	CARU	PHMA	PHMA
Phase			

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Colson Cr. Stand 10

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	a	b	c
Location			
T. R.			
Section			
Elevation	5700	5830	6120
Aspect	S,SW	S	SW
Slope (%)	80	80	70
Topography	3-2	3-2	3-2
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy Coverage		Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	1 1 3	2 2 1-3	2 2 3
9. Pseudotsuga menziesii	PSME	Douglas-fir	2 2 1	2 1 1	2 2 1
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape	T	T	T
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark	T		2
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16 Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	1	2	1
18. Symphoricarpos albus	SYAL	common snowberry	1	2	
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			1
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	1	2	2
2. Calamagrostis rubescens	CARU	pinegrass	T	2	
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	1	2	2
6. Festuca idahoensis	FEID	Idaho fescue	1	2	1
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
Series			PSME		PSME
Habitat type			PHMA	SWAL	PHMA
Phase					

APPENDIX B

Tree Succession and Habitat Type Data for 10 Stands, Chamberlain/Disappointment Study Area.

Stand 1
Cabin Mtn.

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Name

Date

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

	Plot No.	CM 9	b	c
	Location			
	T. R.			
	Section			
	Elevation	6160	-	6000
	Aspect	NE	-	S (Flat)
	Slope (%)	70	-	20
	Topography	2	-	2
	Configuration	2	-	2-1

→ Tree classes: 0-4", 5-20, 20+

	Abbrev.	Common Name	Canopy Coverage		Class
TREES					
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	0	0	T
9. Pseudotsuga menziesii	PSME	Douglas-fir	2	2	1
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark	2	2	
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			4
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's pesvine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	Psme	"	PSME
Habitat type	Phma	"	Hacp
Phase			

Stand CM north slope Conus

3 DI Core ID plot 9

plot 3 c open park Pipe

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Stand 2

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	C a	b	c
Location			
T. R.			
Section			
Elevation	5920	5520	
Aspect	NNE	NNE	
Slope (%)	50	50	
Topography	1-2	1-2	
Configuration	2	2	

→ Tree classes: 0-4", 5-20, 20+

plot C

3 cores

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	1111	0211	1112
9. Pseudotsuga menziesii	PSME	Douglas-fir	212	212	311
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark	2	2	2
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	1	2	1
18. Symphoricarpos albus	SYAL	common snowberry			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	2	2	1
2. Calamagrostis rubescens	CARU	pinegrass	3	3	2
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			1
6. Festuca idahoensis	FEID	Idaho fescue	2	2	2
7. Hesperochlos kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica	2	1	1
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	Psme		
Habitat type	Phma		
Phase			

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Stand 3

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	CWa	b	c
Location			
T. R.			
Section			
Elevation	5840	(same)	=
Aspect	W	=	=
Slope (%)	70	=	=
Topography	2	=	=
Configuration	1	=	=

Cabi
wes

→ Tree classes: 0-4", 5-20, 20+

plot
4 co

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	T/T/4	T/1/3	0/1/3
9. Pseudotsuga menziesii	PSME	Douglas-fir	3/1/0	2/2/0	3/1/0
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark	2	2	1
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	Psme	"	"
Habitat type	Phma		
Phase			

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Stand 4

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	A 9	b	C
Location			
T. R.			
Section			
Elevation	5740	5740	5690
Aspect	ESE	E	E
Slope (%)	70	70	60
Topography	2-1	1-2	1-2
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

plot 9 — 3 cores

TREES	Abbrev.	Common Name	Canopy Coverage		Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	T	T	T
9. Pseudotsuga menziesii	PSME	Douglas-fir	1	2	2
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark	2	2	1
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16 Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	1	1	1
18. Symphoricarpos albus	SYAL	common snowberry	1	1	1
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	3	3	2
6. Festuca idahoensis	FEID	Idaho fescue	2	1	1
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
		Series	Pfle		
		Habitat type	Pfle		
		Phase			

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Stand 5

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	CNa	b	c
Location			
T. R.			
Section			
Elevation	6080	6080	6080
Aspect	S	S	S
Slope (%)	70	70	70
Topography	1-2	1-2	1-2
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

ptal 2 Co

	Abbrev.	Common Name	Canopy Coverage		Class
TREES					
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	T 1 2	T 1 2	1 2 3
9. Pseudotsuga menziesii	PSME	Douglas-fir	1 1 2	1 1 0	1 1 0
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16 Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	T	T	T
18. Symphoricarpos albus	SYAL	common snowberry	T	T	T
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	2	2	2
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	1	1	1
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	PSme	"	"
Habitat type	Sym	"	"
Phase			

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Stand 6

Central Idaho habitat type field form

Name

Date

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Plot No.	RWS a	b	c
Location			
T. R.			
Section			
Elevation	6000	6080	6090
Aspect	SW	S	S
Slope (%)	80	80	80
Topography	1	1	1-2
Configuration	1	1	1

Ridge West South

→ Tree classes: 0-4", 5-20, 20+

	Abbrev.	Common Name	Canopy Coverage		Class
TREES					
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	T/1/2	T/1/2	T/1/1
9. Pseudotsuga menziesii	PSME	Douglas-fir	5/T/0	T/0/0	0/0/0
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	T		T
18. Symphoricarpos albus	SYAL	common snowberry	T		
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	3	2	3
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			
6. Festuca idahoensis	FEID	Idaho fescue	1	1	2
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria carolinienses	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
Series			Vam/	Psm-	
Habitat type			Feid	Feid	"
Phase					

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Stand 7

Name

(Code Description)

Topography:	Horizontal Configuration:	Vegetation Coverage Class:	
1-Ridge	1-Convex (Dry)	0-None	3-25 to 50%
2-Upper Slope	2-Straight	T-Rare to 1%	4-50 to 75%
3-Mid Slope	3-Concave (wet)	1-1 to 5%	5-75 to 95%
4-Lower Slope	4-Undulating	2-5 to 25%	6-95 to 100%
5-Bench or Flat			
6-Streambottom			

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	DTa	b	c
Location			
T. R.			
Section			
Elevation	5600	5660	5700
Aspect	SSE	SSE	SSE
Slope (%)	70	70	70
Topography	2	2	2
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy Coverage		Class	
1. Abies grandis	ABGR	grand fir				
2. Abies lasiocarpa	ABLA	subalpine fir				
3. Larix occidentalis	LAOC	western larch				
4. Picea engelmannii	PIEN	Engelmann spruce				
5. Pinus albicaulis	PIAL	whitebark pine				
6. Pinus contorta	PICO	lodgepole pine				
7. Pinus flexilis	PIFL	limber pine				
8. Pinus ponderosa	PIPO	ponderosa pine	T	T	0	
9. Pseudotsuga menziesii	PSME	Douglas-fir	T	T	0	
10. Populus tremuloides	POTR	quaking aspen				
SHRUBS AND VINES						
1. Acer glabrum	ACGL	mountain maple				
2. Alnus sinuata	ALSI	mountain alder				
3. Artemisia tridentata	ARTR	big sagebrush				
4. Berberis repens (+ aquifolium)	BERE	Oregon grape				
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany				
6. Clematis columbiana	CLCO	rock clematis				
7. Holodiscus discolor	HODI	ocean-spray				
8. Juniperus communis	JUCO	common juniper				
9. Ledum glandulosum	LEGL	Labrador tea				
10. Linnaea borealis	LIBO	twinflower				
11. Menziesia ferruginea	MEFE	menziesia				
12. Physocarpus malvaceus	PHMA	ninebark				
13. Prunus virginiana	PRVI	chokecherry				
14. Purshia tridentata	PUTR	bitterbrush				
15. Ribes cereum	RICE	squaw current				
16. Ribes montigenum	RIMO	mountain gooseberry				
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	1	1	1	
18. Symphoricarpos albus	SYAL	common snowberry	T	T	T	
19. Symphoricarpos oreophilus	SYOR	mountain snowberry				
20. Vaccinium caespitosum	VACA	dwarf huckleberry				
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry				
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry				
GRAMINOIDS						
1. Agropyron spicatum	AGSP	bluebunch wheatgrass				
2. Calamagrostis rubescens	CARU	pinegrass	1	1	1	
3. Calamagrostis canadensis	CACA	bluejoint				
4. Carex disperma	CADI	soft-leaved sedge				
5. Carex geyeri	CAGE	elk sedge	1	2	1	
6. Festuca idahoensis	FEID	Idaho fescue	1	1	1	
7. Hesperochlos kingii	HEKI	spikefescue				
8. Luzula hitchcockii	LUHI	smooth woodrush				
9. Stipa occidentalis	STOC	western needlegrass				
FORBS, FERNS, AND FERN ALLIES						
1. Actaea rubra	ACRU	baneberry				
2. Adenocaulon bicolor	ADBI	trail-plant				
3. Arnica cordifolia	ARCO	heartleaf arnica	T	T	T	
4. Astragalus miser	ASMI	weedy milkvetch				
5. Caltha biflora	CABI	twinflower marsh marigold				
6. Clintonia uniflora	CLUN	queencup beadlily				
7. Coptis occidentalis	COOC	western goldthread				
8. Disporum trachycarpum	DITR	sierra fairybell				
9. Equisetum arvense	EQAR	common horsetail				
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine				
11. Ligusticum canbyi	LICA	Canby's ligusticum				
12. Osmorhiza chilensis	OSCH	mountain sweet-root				
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon				
14. Senecio triangularis	SETR	arrowleaf groundsel				
15. Streptopus amplexifolius	STAM	twisted stalk				
16. Trautvetteria caroliniensis	TRCA	false bugbane				
17. Xerophyllum tenax	XETE	beargrass				

Series	(PSMe)	"	"
Habitat type	(Cv)	"	"
Phase			

Displ
Trai

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Stand 8

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	D a	b	c
Location			
T. R.			
Section			
Elevation	5300	5340	5320
Aspect	SE	S	S
Slope (%)	60	70	65
Topography	2	2	2
Configuration	1	1	1

Disrupted

→ Tree classes: 0-4", 5-20", 20+

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	T/3/2	0/3/2	0/3/3
9. Pseudotsuga menziesii	PSME	Douglas-fir	T/0/0	0/0/0	0/0/0
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea	L	T	L
18. Symphoricarpos albus	SYAL	common snowberry			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			
2. Calamagrostis rubescens	CARU	pinegrass	3	3	3
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica	L	J	L
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia unifloral	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
		Series	Psme	"	"
		Habitat type	Syal	"	"
		Phase			

open park-like PP

plot a

3 cores

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Stand 9

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	DNa	b	c
Location			
T. R.			
Section			
Elevation	5760	5740	5720
Aspect	ESE	ESE	ESE
Slope (%)	70	60	70
Topography	2-1	2-1	2-1
Configuration	1	1	1

Disap Trail North

→ Tree classes: 0-4", 5-20, 20+

plot c 4 co

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	0 T 1 3	T 2 3	0 1 T 3
9. Pseudotsuga menziesii	PSME	Douglas-fir	1 0 1 L	1 2 T	2 1 1 T
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry	2	2	2
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			
6. Festuca idahoensis	FEID	Idaho fescue	T	1	1
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
		Series	Psme	"	
		Habitat type	Syal	"	
		Phase			

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Stand 10

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Petrol South

Date			
Plot No.	PS a	b	c
Location			
T. R.			
Section			
Elevation	6000	6000	6000
Aspect	WNW	WSW	SW
Slope (%)	60	70	70
Topography	2-1	2-1	1-2
Configuration	2	1	1

→ Tree classes: 0-4", 5-20, 20+

plot a

3 cores

plot b

3 cores

TREES	Abbrev.	Common Name	Canopy Coverage		Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	0 [2] 1	0 [2] 2	T T T
9. Pseudotsuga menziesii	PSME	Douglas-fir	2 [2] L	2 [2] L	L T T
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark	2	3	
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw current			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry			1
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass			
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
Series			PSME	PSME	PSME
Habitat type			PHMA	PHMA	SYAL
Phase					

APPENDIX C

Tree Succession and Habitat Type Data for 9 Stands, River Corridor Study Area.

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Stand 1 plot data

Central Idaho habitat type field form. Killum Pt.

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date			
Plot No.	KPa	KPb	c
Location	(map)	=	
T. R.		=	
Section		=	
Elevation	~3000	=	
Aspect	N-NE	N-NE	"
Slope (%)	60	60-70	"
Topography	4	3-4	"
Configuration	1-2	1-3	"

→ Tree classes: 0-4", 5-20, 20+

	Abbrev.	Common Name	Canopy	Coverage	Class
TREES					
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	T T 1	T 2 2	T 1 2
9. Pseudotsuga menziesii	PSME	Douglas-fir	3 2 1	2 3 T	3 2 0
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple	(2)		
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape	T		
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany		T	T
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark	4	4	2
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	1	2	3
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge			
6. Festuca idahoensis	FEID	Idaho fescue	Fesc	Fesc	
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
Series			Psme	Psme	"
Habitat type			Phma	Phma	"
Phase			(Agsp)	(Agsp)	

idto:1 (12) shows KP hillside above river

cores plot a
cores plot b
plot c

Stand 2 Plot Data
Cottonwood Creek

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

CC: Cottonwood CR.

Central Idaho habitat type field form

photo: 1(23) begins @ CC a

6 cores a
3 cores b.
(no plot c.)

-v. open PP/SyororAsp grassy/duff Fuels

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date	—	—	—
Plot No.	CC a	b	c
Location	(map)		
T. R.			
Section			
Elevation	~2900	~2900	2900
Aspect	S	S	S
Slope (%)	45	45	40
Topography	4-5	4	4
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	T/2/2	T/2/2	T/1/2
9. Pseudotsuga menziesii	PSME	Douglas-fir			
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry		T	T
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry	T	T	T
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	2-3	2-3	2
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	L	L	L
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	PIPO	PIPO	"
Habitat type	(agsp)	SyOR	"
Phase			

→ SyOR SyOR

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Stand 3 plot data

Central Idaho habitat type field form

Name

Date	4/16/84		
Plot No.	CH2	CH3	CH4
Location	(map)		
T. R.			
Section			
Elevation	2960		
Aspect	E	E	E
Slope (%)	50 %	60	60
Topography	3/2	3-2	3-2
Configuration	1	1	1

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy Coverage		Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	1	2	7
9. Pseudotsuga menziesii	PSME	Douglas-fir	1	T	T
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany		T	
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			5 stems
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry	3		85
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			#2
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	T	T-1	
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	3-4	T	
6. Festuca idahoensis	FEID	Idaho fescue	T-Fesc-3		
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			

Series	PSME	"	"
Habitat type	Stg	"	"
Phase			

Stand 1 plot data

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

Central Idaho habitat type field form

Stand GC (Goose Camp)

v. open PP/Agsp

photo 1 (25) @ plot b

open & scattered (Pipo 200 yr old)

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date	GC	GC	GC
Plot No.	a	b	c
Location	(map)		
T. R.			
Section			
Elevation	3340	3366	3360
Aspect	S-SW	S	S-SW
Slope (%)	60	60	65
Topography	3-2	4	4
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

TREES	Abbrev.	Common Name	Canopy	Coverage	Class
1. Abies grandis	ABGR	grand fir			
2. Abies lasiocarpa	ABLA	subalpine fir			
3. Larix occidentalis	LAOC	western larch			
4. Picea engelmannii	PIEN	Engelmann spruce			
5. Pinus albicaulis	PIAL	whitebark pine			
6. Pinus contorta	PICO	lodgepole pine			
7. Pinus flexilis	PIFL	limber pine			
8. Pinus ponderosa	PIPO	ponderosa pine	T/2/2	T/T/T	T/T/2
9. Pseudotsuga menziesii	PSME	Douglas-fir	T/2/L	T/0/0	T/T/0
10. Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES					
1. Acer glabrum	ACGL	mountain maple			
2. Alnus sinuata	ALSI	mountain alder			
3. Artemisia tridentata	ARTR	big sagebrush			
4. Berberis repens (+ aquifolium)	BERE	Oregon grape			
5. Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6. Clematis columbiana	CLCO	rock clematis			
7. Holodiscus discolor	HODI	ocean-spray			
8. Juniperus communis	JUCO	common juniper			
9. Ledum glandulosum	LEGL	Labrador tea			
10. Linnaea borealis	LIBO	twinflower			
11. Menziesia ferruginea	MEFE	menziesia			
12. Physocarpus malvaceus	PHMA	ninebark			
13. Prunus virginiana	PRVI	chokecherry			
14. Purshia tridentata	PUTR	bitterbrush			
15. Ribes cereum	RICE	squaw currant			
16. Ribes montigenum	RIMO	mountain gooseberry			
17. Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18. Symphoricarpos albus	SYAL	common snowberry			
19. Symphoricarpos oreophilus	SYOR	mountain snowberry			
20. Vaccinium caespitosum	VACA	dwarf huckleberry			
21. Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22. Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS					
1. Agropyron spicatum	AGSP	bluebunch wheatgrass	2	3	4
2. Calamagrostis rubescens	CARU	pinegrass			
3. Calamagrostis canadensis	CACA	bluejoint			
4. Carex disperma	CADI	soft-leaved sedge			
5. Carex geyeri	CAGE	elk sedge	3	1	L
6. Festuca idahoensis	FEID	Idaho fescue			
7. Hesperochloa kingii	HEKI	spikefescue			
8. Luzula hitchcockii	LUHI	smooth woodrush			
9. Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES					
1. Actaea rubra	ACRU	baneberry			
2. Adenocaulon bicolor	ADBI	trail-plant			
3. Arnica cordifolia	ARCO	heartleaf arnica			
4. Astragalus miser	ASMI	weedy milkvetch			
5. Caltha biflora	CABI	twinflower marsh marigold			
6. Clintonia uniflora	CLUN	queencup beadlily			
7. Coptis occidentalis	COOC	western goldthread			
8. Disporum trachycarpum	DITR	sierra fairybell			
9. Equisetum arvense	EQAR	common horsetail			
10. Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11. Ligusticum canbyi	LICA	Canby's ligusticum			
12. Osmorhiza chilensis	OSCH	mountain sweet-root			
13. Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14. Senecio triangularis	SETR	arrowleaf groundsel			
15. Streptopus amplexifolius	STAM	twisted stalk			
16. Trautvetteria caroliniensis	TRCA	false bugbane			
17. Xerophyllum tenax	XETE	beargrass			
Series			Psme	"	"
Habitat type			Agsp	"	"
Phase					

Stand 5 plot data

APPENDIX F. CENTRAL IDAHO HABITAT TYPE FIELD FORM

(Goose Camp South)

Central Idaho habitat type field form

Name

(Code Description)

Topography: 1-Ridge, 2-Upper Slope, 3-Mid Slope, 4-Lower Slope, 5-Bench or Flat, 6-Streambottom

Horizontal Configuration: 1-Convex (Dry), 2-Straight, 3-Concave (wet), 4-Undulating

Vegetation Coverage Class: 0-None, T-Rare to 1%, 1-1 to 5%, 2-5 to 25%, 3-25 to 50%, 4-50 to 75%, 5-75 to 95%, 6-95 to 100%

Note: Rate trees (>4") and regen (0-4") separately (e.g. 4/2)

Date	GCS	GCS	GCS
Plot No.	a	b	c
Location	(map)		
T. R.			
Section			
Elevation	3280	3200	3290
Aspect	N	N	N
Slope (%)	60	70	60
Topography	4	4	4
Configuration	1	1	1

→ Tree classes: 0-4", 5-20, 20+

		Abbrev.	Common Name	Canopy Coverage		Class
TREES						
1.	Abies grandis	ABGR	grand fir			
2.	Abies lasiocarpa	ABLA	subalpine fir			
3.	Larix occidentalis	LAOC	western larch			
4.	Picea engelmannii	PIEN	Engelmann spruce			
5.	Pinus albicaulis	PIAL	whitebark pine			
6.	Pinus contorta	PICO	lodgepole pine			
7.	Pinus flexilis	PIFL	limber pine			
8.	Pinus ponderosa	PIPO	ponderosa pine	0 T 1	0 0 0	0 0 T
9.	Pseudotsuga menziesii	PSME	Douglas-fir	1 2 2	2 2 2	3 1 2
10.	Populus tremuloides	POTR	quaking aspen			
SHRUBS AND VINES						
1.	Acer glabrum	ACGL	mountain maple			
2.	Alnus sinuata	ALSI	mountain alder			
3.	Artemisia tridentata	ARTR	big sagebrush			
4.	Berberis repens (+ aquifolium)	BERE	Oregon grape			
5.	Cercocarpus ledifolius	CELE	curl-leaf mountain-mahogany			
6.	Clematis columbiana	CLCO	rock clematis			
7.	Holodiscus discolor	HODI	ocean-spray			
8.	Juniperus communis	JUCO	common juniper			
9.	Ledum glandulosum	LEGL	Labrador tea			
10.	Linnaea borealis	LIBO	twinflower			
11.	Menziesia ferruginea	MEFE	menziesia			
12.	Physocarpus malvaceus	PHMA	ninebark	T	1	2
13.	Prunus virginiana	PRVI	chokecherry			
14.	Purshia tridentata	PUTR	bitterbrush			
15.	Ribes cereum	RICE	squaw current			
16.	Ribes montigenum	RIMO	mountain gooseberry			
17.	Spiraea betulifolia (+ pyramidata)	SPBE	white spirea			
18.	Symphoricarpos albus	SYAL	common snowberry			
19.	Symphoricarpos oreophilus	SYOR	mountain snowberry			
20.	Vaccinium caespitosum	VACA	dwarf huckleberry			
21.	Vaccinium globulare (+ membranaceum)	VAGL	blue huckleberry			
22.	Vaccinium scoparium (+ myrtillus)	VASC	grouse whortleberry			
GRAMINOIDS						
1.	Agropyron spicatum	AGSP	bluebunch wheatgrass	4	4	4
2.	Calamagrostis rubescens	CARU	pinegrass			
3.	Calamagrostis canadensis	CACA	bluejoint			
4.	Carex disperma	CADI	soft-leaved sedge			
5.	Carex geyeri	CAGE	elk sedge			
6.	Festuca idahoensis	FEID	Idaho fescue			
7.	Hesperochloa kingii	HEKI	spikefescue			
8.	Luzula hitchcockii	LUHI	smooth woodrush			
9.	Stipa occidentalis	STOC	western needlegrass			
FORBS, FERNS, AND FERN ALLIES						
1.	Actaea rubra	ACRU	baneberry			
2.	Adenocaulon bicolor	ADBI	trail-plant			
3.	Arnica cordifolia	ARCO	heartleaf arnica			
4.	Astragalus miser	ASMI	weedy milkvetch			
5.	Caltha biflora	CABI	twinflower marsh marigold			
6.	Clintonia uniflora	CLUN	queencup beadlily			
7.	Coptis occidentalis	COOC	western goldthread			
8.	Disporum trachycarpum	DITR	sierra fairybell			
9.	Equisetum arvense	EQAR	common horsetail			
10.	Lathyrus nevadensis cusickii	LANC	Cusick's peavine			
11.	Ligusticum canbyi	LICA	Canby's ligusticum			
12.	Osmorhiza chilensis	OSCH	mountain sweet-root			
13.	Penstemon wilcoxii	PEWI	Wilcox's penstemon			
14.	Senecio triangularis	SETR	arrowleaf groundsel			
15.	Streptopus amplexifolius	STAM	twisted stalk			
16.	Trautvetteria caroliniensis	TRCA	false bugbane			
17.	Xerophyllum tenax	XETE	beargrass			

Series	Pgm	Pgm	Pgm
Habitat type	Phma	Phma	Phma
Phase			

Summary of "Fire History of the River of No Return Wilderness: River Breaks Zone"

ABSTRACT: Fire suppression seems to have interrupted the historic fire frequency in some areas of the Salmon River Breaks section of the RONR Wilderness since about 1930. While some ignitions have taken place in 1931, 1961, 1967, and other years, many ignitions were suppressed that could have developed into spreading fires. The absence of fire may have primarily allowed litter and duff to accumulate on the drier south-facing slopes, but has probably allowed substantial successional advances in the more moist, north-facing communities involving Douglas-fir regeneration.

I. Non-wilderness sample: Colson Creek: (3000 acre study area, North Fork Ranger District, Salmon National Forest)

While the earliest fire scar dated from abut 1464, the Master Fire Chronology for Colson Creek extends from 1707 to 1919. About 59 fires burned during this 212 year period, for a Mean Fire Interval (MFI) of 3.6 years. (A fire occurred somewhere in the 3,000 acre study area about every 3.6 years.)

Eleven "major" fires (more than 1000 acres in size) occurred in the drainage between 1707 and 1919, giving a MFI for major fires of about 21 years. Thus nearly 1 fire in 5 burned substantial acreage. Virtually the entire 3,000 acre study area (and probably much more) burned in the years 1863, 1880, and 1919.

Looking at 10 stands of less than 100 acres each, MFI's for the pre-fire suppression (pre-1935) period ranged from 10-18 years (10-stand mean of 13.8 years). The shortest interval found was 3 years and the longest was 35 years. No differences were found related to aspect.

The historic pattern was one of frequent, predominantly surface fires. Stands were relatively open and highly uneven-aged (few age classes could be found). There was a lack of fire mosaic patterns in the lower elevations of the dry, south-oriented drainages in the River Breaks zone.

The last large fire occurred in the study area 65 years ago, in 1919. This long fire-free interval is unprecedented over at least the last 200 years, and evidently reflects efficient fire suppression. Too few fires have burned during the suppression period (post-1935) to be able to calculate a meaningful MFI for the stands. In these dry lower elevation sites, litter accumulation may be the most serious result of fire suppression. Successional changes are more evident in the more moist habitat types, on northerly aspects or above 5,000 feet elevation (see later discussion).

II. Wilderness Sample -- Chamberlain/Disappointment Creek: (4,000 acre study area, Big Creek Ranger District, Payette National Forest)

The Master Fire Chronology for the higher elevation (6,000 feet) Chamberlain/Disappointment Creek unit extends from 1730 to 1934. Fewer fires were recorded in this area, by comparison with Colson Creek. About 18 fires burned during the 204 year period, for a MFI of 12 years. Six major fires occurred in the study area between 1730 and 1934, giving a MFI for major fires of about 41 years. More than 70 percent of the sample trees were scarred by fires in 1846, 1898, and 1919.

MFI's for the pre-suppression period in 10 stands ranged from 15-36 years (10 stand mean of 22.5 years). The shortest interval found was 5 years and the longest was 52 years.

Catfaced trees were less common and had fewer scars on moister sites, suggesting that densely stocked, even-aged Douglas-fir stands on north slopes burned less frequently than dry, open ponderosa pine stands. No frequency could be determined for stand-replacement fires.

The last major fire year here was also 1919, although a relatively small fire occurred in 1934. The current long fire-free interval (stand mean of 60.5 years) is also unprecedented over the past two centuries. On the more moist aspects, stand succession is progressing toward domination by Douglas-fir, although on dry aspects, ponderosa pine is still the only species regenerating successfully.

III. Wilderness Sample -- Salmon River Corridor: (Nine 100-acre or less stands, found between Killum Point and Groundhog Bar along 40 miles of the Salmon River Corridor)

Five stands were located on the dry aspect north (south-facing) side of the river and four on the more moist aspect south (north-facing) side of the river. While the earliest scar dated from 1647, the Master Fire Chronologies for these nine stands were generally about 200 years in length. MFI's for these stands ranged from 10 to 48 years (9-stand mean was 19.9 years). The 5 south-facing stands had a mean MFI of 13.9 years, with the shortest interval being 2 years and the longest 39 years. Three north-facing stands had a mean MFI of 30.9 years, with the shortest interval of 9 years and the longest of 95 years.

Fires were clearly more frequent in dry, open ponderosa pine stands where surface fires were common, while fires were less frequent and occasionally resulted in stand-replacement in the more heavily fueled north-facing stands of Douglas-fir and shrubs. The last major fire here also seems to be 1919, although several lesser fires were found up to 1931. The current fire-free interval averages nearly 57 years for the nine stands.

On south-facing slopes, duff accumulation is the main result of fire's absence, while on north-facing slopes, dense regeneration of Douglas-fir is replacing ponderosa pine in understories of most stands and both living and downed fuels are increasing.

Table A.--Comparison of Master fire chronology, major fires, and pre-suppression stand fire history for three study areas, RONR Wilderness.

Study Area Name (elevation)	Size in acres	Master Fire Chronology Period	No. fires	MFI (years)	Mean Years since last fire	Major Fires (>1000 acres) No. fires	MFI years	Noteworthy years	Pre-Suppression (pre-1935) stand fire history (<100 acres) Range of fire intervals	Range of stand MFI	Mean of stand MFI
Colson Creek (3,200'-6,000')	3,000	1707-1919	59	3-6	61.9 years	11	21	1863 1880 1919	3-35	10-18	13.8
Chamberlain/ Disappointment (6,000')	4,000	1730-1934	18	12	60.5 years	6	41	1846 1898 1919	5-52	15-36	22.5
Salmon River Corridor (2,300'-3,300')	Nine 100 Acre units				56.7 years			1889 1919	2-95	10-48	19.9
S-facing	(N-side) (5 stands)								2-39		13.9
N-facing	(S-side) (3 stands)								9-95		30.9